IN THE CLAIMS

- 1. (original) A polymer comprising at least 50 mol% of one or more C3 to C40 olefins where the polymers has:
 - a) a Dot T-Peel of 1 Newton or more on Kraft paper;
 - b) an Mw of 10,000 to 100,000; and
 - a branching index (g') of 0.98 or less measured at the Mz of the polymer when the polymer has an Mw of 10,000 to 60,000, or a branching index (g') of 0.95 or less measured at the Mz of the polymer when the polymer has an Mw of 10,000 to 100,000.
- 2. (original) The polymer of claim 1 wherein the polymer has:
 - a) a Dot T-Peel of 1 Newton or more on Kraft paper;
 - b) a branching index (g') of 0.98 or less measured at the Mz of the polymer;
 - c) a Mw of 10,000 to 60,000; and
 - d) a heat of fusion of 1 to 50 J/g.
- 3. (original) The polymer of claim 1 where the polymer is a homopolypropylene or a copolymer of propylene and up to 5 mole% ethylene having:
 - a) an isotactic run length of 1 to 30,
 - b) a percent of r dyad of greater than 20%, and
 - c) a heat of fusion of between 1 and 70 J/g.
- 4. (original) The polymer of claim 1 wherein the polymer comprises propylene and less than 15 mole % of ethylene.
- 5. (original) The polymer of claim 1 wherein the polymer has a melt viscosity of 7000 mPa•sec or less at 190°C.
- 6. (original) The polymer of claim 1 wherein the polymer has a melt viscosity of 5000 mPa•sec or less at 190°C.

- 7. (original) The polymer of claim 1 wherein the polymer has a melt viscosity of between 250 and 6000 mPa•sec at 190°C.
- 8. (original) The polymer of claim 1 wherein the polymer has a melt viscosity of between 500 and 3000 mPa•sec at 190°C.
- 9. (original) The polymer of claim 4 wherein the polymer has a Tg of 0°C or less.
- 10. (original) The polymer of claim 4 wherein the polymer has a Tg of -10°C or less.
- (original) The polymer of claim 1 wherein the polymer has an Mw of 10,000 to 75,000 and a branching index of 0.6 or less.
- 12. (original) The polymer of claim 1 wherein the polymer has an Mw of 10,000 to 50,000 and a branching index of 0.7 or less.
- 13. (original) The polymer of claim 1 wherein the polymer has an Mw of 10,000 to 30,000 and a branching index of 0.98 or less.
- 14. (original) The polymer of claim 1 wherein the polymer has a branching index (g') of 0.90 or less measured at the Mz of the polymer.
- (original) The polymer of claim 1 wherein the SEC graph of the polymer is bi- or multi-modal.
- 16. (original) The polymer of claim 1 wherein the polymer has an amorphous content of at least 50%.
- 17. (original) The polymer of claim 1 wherein the polymer has
 - a) a peak melting point between 60 and 190°C;
 - b) a heat of fusion of 0 to 70 J/g; and
 - c) a melt viscosity of 8000 mPa•sec or less at 190°C.

- 18. (original) The polymer of claim 1 wherein the polymer has:
 - a) a Tg of -10°C or less;
 - b) a melt viscosity between 2000 and 6000 mPa•sec;
 - c) a molecular weight distribution (Mw/Mn) of at least 5; and
 - d) a bi- or multi-modal SEC graph of the polymer.
- 19. (original) The polymer of claim 1 wherein the polymer has a crystallinity of at least 5%.
- 20. (original) The polymer of claim 1 wherein the polymer has 20 wt.% or more of hexane room temperature soluble fraction and 50 wt % or less of Soxhlet heptane insolubles.
- 21. (original) The polymer of claim 1 wherein the polymer comprises less than 3.0 mole % ethylene.
- 22. (original) The polymer of claim 1 wherein the polymer comprises less than 1.0 mole % ethylene.
- 23. (original) A composition comprising the polymer of claim 1 and a functionalized wax.
- 24. (original) A composition comprising the polymer of claim 1 and a wax.
- 25. (original) A composition comprising the polymer of claim 1 and a hydrocarbon resin.
- 26. (original) The polymer of claim 1 further comprising diolefin.
- 27. (original) The polymer of claim 26 wherein the diolefin comprises one or more C4 to C40 diolefins.
- 28. (original) The polymer of claim 26 wherein the diolefin is selected from the group consisting of 1,6-heptadiene, 1,7-octadiene, 1,8-nonadiene, 1,9-decadiene, 1,10-undecadiene, 1,11-dodecadiene, 1,12-tridecadiene, 1,13-tetradecadiene,

cyclopentadiene, vinylnorbornene, norbornadiene, ethylidene norbornene, divinylbenzene, dicyclopentadiene, polybutadienes having an Mw less than 1000 g/mol, or combinations thereof.

- 29. (original) The polymer of claim 1 wherein the polymer has an Mz/Mn of 2 to 200.
- 30. (original) The polymer of claim 1 wherein the polymer has an Mz of 15,000 to 500,000.
- 31. (original) The polymer of claim 1 wherein the polymer has a SAFT of 50 to 150°C.
- 32. (original) The polymer of claim 1 wherein the polymer has a Shore A hardness of 95 or less.
- 33. (original) The polymer of claim 1 wherein the polymer has a set time of 5 seconds or less.
- 34. (original) The polymer of claim 1 wherein the polymer has an Mw/Mn of 2 to 75.
- 35. (withdrawn) A continuous process to produce a branched olefin polymer comprising:
 - selecting a first catalyst component capable of producing a polymer having an Mw of 100,000 or less and a crystallinity of 5% or less under selected polymerization conditions;
 - 2) selecting a second catalyst component capable of producing polymer having an Mw of 100,000 or less and a crystallinity of 20% or more at the selected polymerization conditions;
 - 3) contacting the catalyst components in the presence of one or more activators with one or more C3 to C40 olefins; and,
 - 4) at a temperature of greater than 100°C;
 - 5) at a residence time of 120 minutes or less;
 - 6) wherein the ratio of the first catalyst to the second catalyst is from 1:1 to 50:1;

- wherein the activity of the catalyst components is at least 50 kilograms of polymer per gram of the catalyst compounds; and wherein at least 80% of the olefins are converted to polymer.
- 36. (withdrawn) The process of claim 35 wherein the olefin comprises propylene.
- 37. (withdrawn) The process of claim 35 wherein the first catalyst component comprises a non-stereospecific metallocene catalyst compound.
- 38. (withdrawn) The process of claim 35 wherein the first catalyst component comprises a stereospecific metallocene catalyst compound.
- 39. (withdrawn) The process of claim 35 wherein the second catalyst component comprises a stereospecific metallocene catalyst compound.
- 40. (withdrawn) The process of claim 35 wherein the first catalyst component comprises one or more of dimethylsilyl(tetramethylcyclopentadienyl)(cyclododecylamido) titanium dichloride, dimethylsilyl(tetramethylcyclopentadienyl)(cyclohexyl-amido) titanium dichloride, dimethylsilyl(tetramethylcyclopentadienyl)(1-adamantylamido) titanium dichloride, dimethylsilyl(tetramethylcyclopentadienyl)(t-butylamido) titanium dichloride, dimethylsilyl(tetramethylcyclopentadienyl)(s-butylamido) titanium dichloride, dimethylsilyl(tetramethylcyclopentadienyl)(n-butylamido) titanium dichloride, dimethylsilyl(tetramethylcyclopentadienyl)(exo-2-norbomylamido) titanium dichloride,

diethylsilyl(tetramethylcyclopentadienyl)(cyclododecyl-amido) titanium dichloride, diethylsilyl(tetramethylcyclopentadienyl)(exo-2-norbornylamido) titanium dichloride, diethylsilyl(tetramethylcyclopentadienyl)(cyclohexyl-amido) titanium dichloride, diethylsilyl(tetramethylcyclopentadienyl)(1-adamantylamido) titanium dichloride, methylene(tetramethylcyclopentadienyl)(cyclododecyl-amido) titanium dichloride, methylene(tetramethylcyclopentadienyl)(exo-2-norbornylamido) titanium dichloride, methylene(tetramethylcyclopentadienyl)(cyclohexylamido) titanium dichloride, methylene(tetramethylcyclopentadienyl)(1-adamantylamido) titanium dichloride, methylene(tetramethylcyclopentadienyl)(1-adamantylamido) titanium dichloride.

dimethylsilyl(tetramethylcyclopentadienyl)(cyclododecylamido) titanium dimethyl, dimethylsilyl(tetramethylcyclopentadienyl)(exo-2-norbornylamido) titanium dimethyl,

dimethylsilyl(tetramethylcyclopentadienyl)(cyclohexyl-amido) titanium dimethyl, dimethylsilyl(tetramethylcyclopentadienyl)(1-adamantylamido) titanium dimethyl, dimethylsilyl(2,5-dimethylcyclopentadienyl)(cyclododecylamido) titanium dichloride, dimethylsilyl(2,5-dimethylcyclopentadienyl)(exo-2-norbornylamido) titanium dichloride,

dimethylsilyl(2,5-dimethylcyclopentadienyl)(cyclohexylamido) titanium dichloride, dimethylsilyl(2,5-dimethylcyclopentadienyl)(1-adamantylamido) titanium dichloride, dimethylsilyl(3,4-dimethylcyclopentadienyl)(cyclododecylamido) titanium dichloride, dimethylsilyl(3,4-dimethylcyclopentadienyl)(exo-2-norbornylamido) titanium dichloride,

dimethylsilyl(3,4-dimethylcyclopentadienyl)(cyclohexylamido) titanium dichloride, dimethylsilyl(3,4-dimethylcyclopentadienyl)(1-adamantylamido) titanium dichloride, dimethylsilyl(2-ethyl-5-methylcyclopentadienyl)(cyclododecylamido)titanium dichloride,

dimethylsilyl(2-ethyl-5-methylcyclopentadienyl)(exo-2-norbornylamido) titanium dichloride, dimethylsilyl(2-ethyl-5-methylcyclopentadienyl)(cyclohexylamido) titanium dichloride,

dimethylsilyl(2-ethyl-5-methylcyclopentadienyl)(1-adamantylamido) titanium dichloride,

dimethylsilyl(3-ethyl-4-methylcyclopentadienyl)(cyclododecylamido)titanium dichloride,

dimethylsilyl(3-ethyl-4-methylcyclopentadienyl)(exo-2-norbornylamido) titanium dichloride,

dimethylsilyl(3-ethyl-4-methylcyclopentadienyl)(cyclohexylamido) titanium dichloride, dimethylsilyl(3-ethyl-4-methylcyclopentadienyl)(1-adamantylamido) titanium dichloride,

dimethylsilyl(2-ethyl-3-hexyl-5-methyl-4-octylcyclopentadienyl)(cyclododecylamido) titanium dichloride,

dimethylsilyl(2-ethyl-3-hexyl-5-methyl-4-octylcyclopentadienyl)(exo-2-norbornylamido) titanium dichloride.

dimethylsilyl(2-ethyl-3-hexyl-5-methyl-4-octylcyclopentadienyl)(cyclohexylamido) titanium dichloride,

dimethylsilyl(2-ethyl-3-hexyl-5-methyl-4-octylcyclopentadienyl)(1-adamantylamido) titanium dichloride,

dimethylsilyl(2-tetrahydroindenyl)(cyclododecylamido) titanium dichloride,

dimethylsilyl(2-tetrahydroindenyl)(cyclohexylamido) titanium dichloride,

dimethylsilyl(2-tetrahydroindenyl)(1-adamantylamido) titanium dichloride,

dimethylsilyl(2-tetrahydroindenyl)(exo-2-norbornylamido) titanium dichloride,

dimethylsilyl(tetramethylcyclopentadienyl)(cyclododecylamido) titanium dimethyl,

dimethylsilyl(tetramethylcyclopentadienyl)(cyclohexyl-amido) titanium dimethyl,

dimethylsilyl(tetramethylcyclopentadienyl)(1-adamantylamido) titanium dimethyl,

dimethylsilyl(tetramethylcyclopentadienyl)(t-butylamido) titanium dimethyl.

dimethylsilyl(tetramethylcyclopentadienyl)(s-butylamido) titanium dimethyl, dimethylsilyl(tetramethylcyclopentadienyl)(n-butylamido)

titanium dimethyl, dimethylsilyl(tetramethylcyclopentadienyl)(exo-2-norbomylamido)

titanium

dimethyl.

diethylsilyl(tetramethylcyclopentadienyl)(cyclododecyl-amido) titanium dimethyl, diethylsilyl(tetramethylcyclopentadienyl)(exo-2-norbornylamido) titanium dimethyl, diethylsilyl(tetramethylcyclopentadienyl)(cyclohexyl-amido) titanium dimethyl, diethylsilyl(tetramethylcyclopentadienyl)(1-adamantylamido) titanium dimethyl, methylene(tetramethylcyclopentadienyl)(cyclododecyl-amido) titanium dimethyl, methylene(tetramethylcyclopentadienyl)(exo-2-norbornylamido) titanium dimethyl, methylene(tetramethyleyclopentadienyl)(cyclohexylamido) titanium dimethyl, methylene(tetramethylcyclopentadienyl)(1-adamantylamido) titanium dimethyl, dimethylsilyl(tetramethylcyclopentadienyl)(cyclododecylamido) titanium dimethyl, dimethylsilyl(tetramethylcyclopentadienyl)(exo-2-norbornylamido) titanium dimethyl,

dimethylsilyl(tetramethylcyclopentadienyl)(cyclohexyl-amido) titanium dimethyl, dimethylsilyl(tetramethylcyclopentadienyl)(1-adamantylamido) titanium dimethyl, dimethylsilyl(2,5-dimethylcyclopentadienyl)(cyclododecylamido) titanium dimethyl, dimethylsilyl(2,5-dimethylcyclopentadienyl)(exo-2-norbornylamido) titanium dimethyl,

dimethylsilyl(2,5-dimethylcyclopentadienyl)(cyclohexylamido) titanium dimethyl,

dimethylsilyl(2,5-dimethylcyclopentadienyl)(1-adamantylamido) titanium dimethyl, dimethylsilyl(3,4-dimethylcyclopentadienyl)(cyclododecylamido) titanium dimethyl, dimethylsilyl(3,4-dimethylcyclopentadienyl)(exo-2-norbornylamido) titanium dimethyl,

dimethylsilyl(3,4-dimethylcyclopentadienyl)(cyclohexylamido) titanium dimethyl, dimethylsilyl(3,4-dimethylcyclopentadienyl)(1-adamantylamido) titanium dimethyl, dimethylsilyl(2-ethyl-5-methylcyclopentadienyl)(cyclododecylamido)titanium dimethyl,

dimethylsilyl(2-ethyl-5-methylcyclopentadienyl)(exo-2-norbornylamido) titanium dimethyl, dimethylsilyl(2-ethyl-5-methylcyclopentadienyl)(cyclohexylamido) titanium dimethyl,

dimethylsilyl(2-ethyl-5-methylcyclopentadienyl)(1-adamantylamido) titanium dimethyl, dimethylsilyl(3-ethyl-4-methylcyclopentadienyl)(cyclododecylamido)titanium dimethyl,

dimethylsilyl(3-ethyl-4-methylcyclopentadienyl)(exo-2-norbornylamido) titanium dimethyl,

dimethylsilyl(3-ethyl-4-methylcyclopentadienyl)(cyclohexylamido) titanium dimethyl, dimethylsilyl(3-ethyl-4-methylcyclopentadienyl)(1-adamantylamido) titanium dimethyl, dimethylsilyl(2-ethyl-3-hexyl-5-methyl-4-octylcyclopentadienyl)(cyclododecylamido) titanium dimethyl,

dimethylsilyl(2-ethyl-3-hexyl-5-methyl-4-octylcyclopentadienyl)(exo-2-norbornylamido) titanium dimethyl,

dimethylsilyl(2-ethyl-3-hexyl-5-methyl-4-octylcyclopentadienyl)(cyclohexylamido) titanium dimethyl,

dimethylsilyl(2-ethyl-3-hexyl-5-methyl-4-octylcyclopentadienyl)(1-adamantylamido) titanium dimethyl,

dimethylsilyl(2-tetrahydroindenyl)(cyclododecylamido) titanium dimethyl, dimethylsilyl(2-tetrahydroindenyl)(cyclohexylamido) titanium dimethyl, dimethylsilyl(2-tetrahydroindenyl)(1-adamantylamido) titanium dimethyl, and dimethylsilyl(2-tetrahydroindenyl)(exo-2-norbornylamido) titanium dimethyl.

41. (withdrawn) The process of claim 35 wherein the second catalyst component comprises one or more of the racemic versions of:

dimethylsilyl (2-methyl-4-phenylindenyl) zirconium dichloride, dimethylsilyl (2-methyl-4-phenylindenyl) zirconium dimethyl, dimethylsilyl (2-methyl-4-phenylindenyl) hafnium dichloride, dimethylsilyl (2-methyl-4-phenylindenyl) hafnium dimethyl, dimethylsilyl bis(indenyl)hafnium dimethyl, dimethylsilyl bis(indenyl)hafnium dichloride, dimethylsilyl bis(indenyl)ziconium dimethyl, dimethylsilyl bis(indenyl)zirconium dichloride, the racemic isomers of: dimethylsilanediylbis(2-methylindenyl)metal dichloride; dimethylsilanediylbis(indenyl)metal dichloride: dimethylsilanediylbis(indenyl)metal dimethyl: dimethylsilanediylbis(tetrahydroindenyl)metal dichloride: dimethylsilanediylbis(tetrahydroindenyl)metal dimethyl; dimethylsilanediylbis(indenyl)metal diethyl; and dibenzylsilanediylbis(indenyl)metal dimethyl; wherein the metal can be chosen from Zr, Hf, ог Ti.

- 42. (withdrawn) The process of claim 35 wherein the activator comprises an alumoxane.
- 43. (withdrawn) The process of claim 35 wherein the activator comprises an ionizing compound.
- 44. (withdrawn) The process of claim 35 wherein the activator comprises a non-coordinating anion.
- 45. (withdrawn) The process of claim 35 wherein the activator comprises one or more of methylalumoxane, trimethylammonium tetraphenylborate, triethylammonium tetraphenylborate, tripropylammonium tetraphenylborate, tri(n-butyl)ammonium tetraphenylborate, tri(t-butyl)ammonium tetraphenylborate,

N,N-dimethylanilinium tetraphenylborate. N,N-diethylanilinium tetraphenylborate, N,N-dimethyl-(2,4,6-trimethylanilinium) tetraphenylborate, trimethylammonium tetrakis(pentafluorophenyl)borate, triethylammonium tetrakis(pentafluorophenyl)borate, tripropylammonium tetrakis(pentafluorophenyl)borate, tri(n-butyl)ammonium tetrakis(pentafluorophenyl)borate, tri(sec-butyl)ammonium tetrakis(pentafluorophenyl) borate, N,N-dimethylanilinium tetrakis(pentafluorophenyl) borate, N,N-diethylanilinium tetrakis(pentafluorophenyl) borate, N,N-dimethyl-(2,4,6-trimethylanilinium) tetrakis(pentafluorophenyl) borate, trimethylammonium tetrakis-(2,3,4,6-tetrafluorophenylborate, triethylammonium tetrakis-(2,3,4,6-tetrafluorophenyl) borate, tripropylammonium tetrakis-(2,3,4,6-tetrafluorophenyl) borate, tri(n-butyl)ammonium tetrakis-(2,3,4,6-tetrafluoro-phenyl) borate, dimethyl(t-butyl)ammonium tetrakis-(2,3,4,6-tetrafluorophenyl) borate, N,N-dimethylanilinium tetrakis-(2,3,4,6-tetrafluorophenyl) borate, N,N-diethylanilinium tetrakis-(2,3,4,6-tetrafluorophenyl) borate, and N,N-dimethyl-(2,4,6-trimethylanilinium)tetrakis-(2,3,4,6-tetrafluorophenyl) borate; di-(i-propyl)ammonium tetrakis(pentafluorophenyl) borate; dicyclohexylammonium tetrakis(pentafluorophenyl) borate; triphenylphosphonium tetrakis(pentafluorophenyl) borate; tri(o-tolyl)phosphonium tetrakis(pentafluorophenyl) borate; and tri(2,6-dimethylphenyl)phosphonium tetrakis(pentafluorophenyl) borate.

- 46. (withdrawn) The process of claim 35 wherein the first catalyst component is capable of polymerizing macromonomers having reactive termini; and the second component is capable of producing macromonomers having reactive termini.
- 47. (withdrawn) The process of claim 35 wherein the first catalyst component comprises one or more of di(p-triethylsilylphenyl)methylene(cyclopentadienyl)(3,8-di-t-butylfluorenyl) zirconium dichloride, di(p-triethylsilylphenyl)methylene(cyclopentadienyl)(3,8-di-t-butylfluorenyl)

butylfluorenyl) hafnium dichloride. di(ptriethylsilylphenyl)methylene(cyclopentadienyl)(3,8-di-t-butylfluorenyl) zirconium di(p-triethylsilylphenyl)methylene(cyclopentadienyl)(3,8-di-tdimethyl. butylfluorenyl) hafnium dimethyl, di(ptriethylsilylphenyl)methylene(cyclopentadienyl)(3,3,6,6,9,9,12,12-octamethyl-4,4,5,5,8,8,9,9-octahydrodibenzyl[b,h]fluorenyl) zirconium dichloride, di(ptriethylsilylphenyl)methylene(cyclopentadienyl)(3,3,6,6,9,9,12,12-octamethyl-4,4,5,5,8,8,9,9-octahydrodibenzyl[b,h]fluorenyl) hafnium dichloride. di(p-4,4,5,5,8,8,9,9-octahydrodibenzyl[b,h]fluorenyl) zirconium dimethyl, di(ptriethylsilylphenyl)methylene(cyclopentadienyl)(3,3,6,6,9,9,12,12-octamethyl-4,4,5,5,8,8,9,9-octahydrodibenzyl[b,h]fluorenyl) hafnium dimethyl, and the meso forms of: dimethylsilylbis(indenyl) zirconium dichloride, dimethylsilylbis(indenyl) zirconium dimethyl, ethylenebis(indenyl) zirconium dichloride, ethylenebis(indenyl) zirconium dimethyl, dimethylsilylbis(indenyl) hafnium dichloride, dimethylsilylbis(indenyl) hafnium dimethyl, ethylenebis(indenyl) hafnium dichloride, ethylenebis(indenyl) hafnium dimethyl, dimethylsilylbis(tetrahydroindenyl) zirconium dichloride. dimethylsilylbis(tetrahydroindenyl) zirconium dimethyl, ethylenebis(tetrahydroindenyl) zirconium dichloride. ethylenebis(tetrahydroindenyl) zirconium dimethyl, dimethylsilylbis(tetrahydroindenyl) hafnium dichloride. dimethylsilylbis(tetrahydroindenyl) hafnium dimethyl, ethylenebis(tetrahydroindenyl) hafnium dichloride, ethylenebis(tetrahydroindenyl) hafnium dimethyl. dimethylsilylbis(2-methylindenyl) zirconium dimethylsilylbis(2dichloride, methylindenyl) zirconium dimethyl, ethylenebis(2-methylindenyl) zirconium dichloride, ethylenebis(2-methylindenyl) zirconium dimethyl, dimethylsilylbis(2methylindenyl) hafnium dichloride, dimethylsilylbis(2-methylindenyl) dimethyl, ethylenebis(2-methylindenyl) hafnium dichloride, and ethylenebis(2methylindenyl) hafnium dimethyl.

48. (withdrawn) The process of claim 35 wherein the monomers comprise propylene and butene.

- 49. (withdrawn) The process of claim 35 further comprising diolefin.
- 50. (withdrawn) The process of claim 49 wherein the diolefin comprises one or more C4 to C40 diolefins.
- 51. (withdrawn) The process of claim 50 wherein the wherein the diolefin is selected from the group consisting of 1,6-heptadiene, 1,7-octadiene, 1,8-nonadiene, 1,9-decadiene, 1,10-undecadiene, 1,11-dodecadiene, 1,12-tridecadiene, 1,13-tetradecadiene, cyclopentadiene, vinylnorbornene, norbornadiene, ethylidene norbornene, divinylbenzene, dicyclopentadiene, polybutadienes having an Mw less than 1000 g/mol, or combinations thereof.
- 52. (withdrawn) The process of claim 49 further comprising one or more dienes selected from the group consisting of 1,6-heptadiene, 1,7-octadiene, 1,8-nonadiene, 1,9-decadiene, 1,10-undecadiene, 1,11-dodecadiene, 1,12-tridecadiene, 1,13-tetradecadiene, cyclopentadiene, vinylnorbornene, norbornadiene, ethylidene norbornene, divinylbenzene, dicyclopentadiene, polybutadienes having an Mw less than 1000 g/mol, or combinations thereof.
- 53. (withdrawn) The process of claim 35 wherein the reaction zone is a gas phase reactor.
- 54. (withdrawn) The process of claim 35 wherein the reaction zone is a solution phase reactor.
- 55. (withdrawn) The process of claim 35 wherein the reaction zone is a slurry phase reactor.
- 56. (withdrawn) The process of claim 36 wherein the reaction zone is a solution phase reactor.
- 57. (withdrawn) The process of claim the catalysts comprise one or more of the following combinations (where Me equals methyl, Ph equals phenyl, Et equals ethyl, Cp equals cyclopentadienyl, 3,6-di-t-BuFlu equals 3,8-di-tert-butylfluorenyl, 2-Me-4-PhInd

equals 2-methyl-4-phenylindenyl, 2-MeInd means 2-methylindenyl, c- $C_{12}H_{23}$ equals cyclododecyl, Me_4C_5 - tetramethylcyclopentadienyl, H_4 Ind equals tetrahydroindenyl, and Ind equals indenyl):

- (1) Me₂Si(Me₄C₅)(N-c-C₁₂H₂₃)TiCl₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrCl₂ activated with an alumoxane;
- (2) Me₂Si(Me₄C₅)(N-c-C₁₂H₂₃)TiMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with a non-coordinating anion activator,
- (2a) Me₂Si(Me₄C₅)(N-c-C₁₂H₂₃)TiMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbonium tetrakis(pentaflourophenyl)boron;
- (3) Me₂Si(Me₄C₅)(N-c-C₁₂H₂₃)TiCl₂ and rac-Me₂Si(2-MeInd)₂ZrCl₂ activated with an alumoxane;
- (4) Me₂Si(Me₄C₅)(N-c-C₁₂H₂₃)TiMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (4a) Me₂Si(Me₄C₅)(N-c-C₁₂H₂₃)TiMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbonium tetrakis(pentaflourophenyl)boron;
- (5) Me₂Si(Me₄C₅)(N-1-adamantyl)TiCl₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrCl₂ activated with an alumoxane;
- (6) Me₂Si(Me₄C₅)(N-1-adamantyl)TiMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (6a) Me₂Si(Me₄C₅)(N-1-adamantyl)TiMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbonium tetrakis(pentaflourophenyl)boron;

- (7) Me₂Si(Me₄C₅)(N-1-adamantyl)TiCl₂ and rac-Me₂Si(2-MeInd)₂ZrCl₂ activated with an alumoxane;
- (8) Me₂Si(Me₄C₅)(N-1-adamantyl)TiMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (8a) Me₂Si(Me₄C₅)(N-1-adamantyl)TiMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbonium tetrakis(pentaflourophenyl)boron;
- (9) Me₂Si(Me₄C₅)(N-t-butyl)TiCl₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrCl₂ activated with an alumoxane;
- (10) Me₂Si(Me₄C₅₎(N-t-butyl)TiMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (10a) Me₂Si(Me₄C₅)(N-t-butyl)TiMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbonium tetrakis(pentaflourophenyl)boron;
- (11) Me₂Si(Me₄C₅)(N-t-butyl)TiCl₂ and rac-Me₂Si(2-MeInd) activated with an alumoxane;
- (12) Me₂Si(Me₄C₅)(N-t-butyl)TiMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (12a) Me₂Si(Me₄C₅)(N-t-butyl)TiMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbonium tetrakis(pentaflourophenyl)boron;
- (13) Me₂Si(Me₄C₅)(N-exo-norbornyl)TiCl₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrCl₂ activated with an alumoxane;

- (14) Me₂Si(Me₄C₅)(N-exo-norbornyl)TiMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (14a) Me₂Si(Me₄C₅)(N-exo-norbornyl)TiMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbonium tetrakis(pentaflourophenyl)boron;
- (15) Me₂Si(Me₄C₅)(N-exo-norbornyl)TiCl₂ and rac-Me₂Si(2-MeInd)₂ZrCl₂ activated with an alumoxane;
- (16) Me₂Si(Me₄C₅)(N-exo-norbornyl)TiMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (16a) Me₂Si(Me₄C₅) N-exo-norbornyl)TiMe₂ and rac-Me₂Si(2-McInd)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbonium tetrakis(pentaflourophenyl)boron;
- (17) (p-Et₃SiPh)₂C(Cp)(3,8-di-t-BuFlu)HfCl₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrCl₂ activated with an alumoxane;
- (18) (p-Et₃SiPh)₂C(Lp)(3,8-di-t-BuFlu)HfMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ attivated with a non-coordinating anion activator;
- (18a) (p-Et₃SiPh)₂C(Cp)(3,8-di-t-BuFlu)HfMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbonium tetrakis(pentaflourophenyl)boron;
- (19) (p-Et₃SiPh)₂C(Cp)(3,8-di-t-BuFlu)HfCl₂ and rac-Me₂Si(2-MeInd)₂ZrCl₂ activated with at alumoxane;
- (20) (p-Et₃SiPh)₂C(Cp)(3,8-di-t-BuFlu)HfMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with a con-coordinating anion activator;

- (20a) (p-Et₃SiPh)₂Ccp)(3,8-di-t-BuFlu)HfMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbonium tetrakis(pentaflourophenyl)boron;
- (21) meso-CH₂CH₂Ind)₂ZrCl₂ and rac-Me₂Si(H₄Ind)₂ZrCl₂ activated with an alumoxane;
- (22) mcso-CH₂CH-Ind)₂ZrMe₂ and rac-Me₂Si(H₄Ind)₂ZrMe₂ activated with a non-coordinating artion activator;
- (22a) meso-CH₂CH₂tind)₂ZrMe₂ and rac-Me₂Si(H₄Ind)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarborium tetrakis(pentaflourophenyl)boron;
- (23) meso-CH₂CH₂and)₂ZrCl₂ and rac-Me₂Si(2-MeInd)₂ZrCl₂ activated with an alumoxane;
- (24) meso-CH₂CH₂ and part and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (24a) meso-CH₂CH₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with N,N-dimethyla linium tetrakis(pentaflourophenyl)boron and or triphenylcarbor um tetrakis(pentaflourophenyl)boron;
- (25) meso-Me₂Si(In 2ZrCl₂ and rac-Me₂Si(H₄Ind)₂ZrCl₂ activated with an alumoxane;
- (26) meso-Me₂Si(Ind₂ZrMe₂ and rac-Me₂Si(H₄Ind)₂ZrMe₂ activated with a non-coordinating and an activator;

- (26a) meso-Me₂Si(1,d)₂ZrMe₂ and rac-Me₂Si(H₄Ind)₂ZrMe₂ activated with N,N-dimethylanilinum tetrakis(pentaflourophenyl)boron and or triphenylcarbonium tetrakis(pentaflourophenyl)boron;
- (27) meso-Me₂Si(Isi)₂ZrCl₂ and rac-Me₂Si(2-MeInd)₂ZrCl₂ activated with an alumoxane;
- (28) meso-Me₂Si(I₁)₂ZrMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with a non-coordinate g anion activator;
- (28a) meso-Me₂Si(ln i)₂ZrMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with N,N-dimethylanilin m tetrakis(pentaflourophenyl)boron and or triphenylcarborium tetrakis(pentaflourophenyl)boron;
- (29) meso-Me₂Si(2-Me-Ind)₂ZrCl₂ and rac-Me₂Si(2-Me-Ind)₂ZrCl₂ activated with an alumove the;
- (30) meso-Me₂Si(2-Me₁deInd)₂ZrMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (30a) meso-Me₂Si(2-IteInd)₂ZrMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with N,N-dir ethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbor im tetrakis(pentaflourophenyl)boron;
- (31) meso-Me₂Si(2-MeInd)₂ZrCl₂ and rac-Me₂Si(2-MeInd)₂ZrCl₂ activated with an alumoxane;
- (32) meso-Me₂Si(2-MeInd)₂ZrMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with a non-coordinate g anion activator;
- (32a) meso-Me₂Si(2-Melnd)₂ZrMe₂ and rac-Me₂Si(2-Melnd)₂ZrMe₂ activated with N,N-dimethylar inium tetrakis(pentaflourophenyl)boron and or triphenylcarbon m tetrakis(pentaflourophenyl)boron;

- (33) meso-CH₂CH 2-MeInd)₂ZrCl₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrCl₂ activated with an alumculane;
- (34) meso-CH₂CH₂2-MeInd)₂ZrMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with non-coordinating anion activator;
- (34a) meso-CH₂CH₂2-MeInd)₂ZrMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with [,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbo um tetrakis(pentaflourophenyl)boron;
- (35) meso-CH₂CH₂C-MeInd)₂ZrCl₂ and rac-Me₂Si(2-MeInd)₂ZrCl₂ activated with an alumoxane;
- (36) meso-CH₂CH₂ -MeInd)₂ZrMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (36a) meso-CH₂CH₂(I-MeInd)₂ZrMe₂ and rac-Me₂Si(2-MeInd)₂ZrMe₂ activated with N,N-directhylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbor im tetrakis(pentaflourophenyl)boron;
- (37) meso-Me₂Si(2-le-4-PhInd)₂ZrCl₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrCl₂ activated with a alumoxane;
- (38) meso-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with a con-coordinating anion activator;
- (38a) meso-Me₂Si(2-le-4-PhInd)₂ZrMe₂ and rac-Me₂Si(2-Me-4-PhInd)₂ZrMe₂ activated with N N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbon in tetrakis(pentaflourophenyl)boron;
- (39) meso-CH₂CH₂(2 Me-4-PhInd)₂ZrCl₂ and rac-CH₂CH₂(2-Me-4-PhInd)₂ZrCl₂ activated with an alumoxane;

- (40) meso-CH₂CH₁(2-Me-4-PhInd)₂ZrMe₂ and rac-CH₂CH₂(2-Me-4-PhInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (40a) meso-CH₂CH₂2-Me-4-PhInd)₂ZrMe₂ and rac-CH₂CH₂(2-Me-4-PhInd)₂ZrMe₂ activated with 1,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarborium tetrakis(pentaflourophenyl)boron;
- (41) meso-CH₂CH₂ 2-MeInd)₂ZrCl₂ and rac-CH₂CH₂(2-MePhInd)₂ZrCl₂ activated with an alumostane;
- (42) meso-CH₂CH₂ I-MeInd)₂ZrMe₂ and rac-CH₂CH₂(2-MeInd)₂ZrMe₂ activated with a non-coordinating anion activator;
- (42a) meso-CH₂CH₂ d-MeInd)₂ZrMe₂ and rac-CH₂CH₂(2-MeInd)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbor tim tetrakis(pentaflourophenyl)boron;
- (43) meso-CH₂CI₁₂(Ind)₂ZrCl₂ and rac-CH₂CH₂(Ind)₂ZrCl₂ activated with an alumoxane;
- (44) meso-CH₂CH₂(Ind)₂ZrMe₂ and rac-CH₂CH₂(Ind)₂ZrMe₂ activated with a non-coordinating and an activator;
- (44a) meso-CH₂CH₂(11d)₂ZrMe₂ and rac-CH₂CH₂(Ind)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbon im tetrakis(pentaflourophenyl)boron;
- (45) meso-Me₂Si(Ind), ZrCl₂ and rac-Me₂Si(Ind)₂ZrCl₂ activated with an alumoxane:
- (46) meso-Me₂Si(Ind) ZrMe₂ and rac-Me₂Si(Ind)₂ZrMe₂ activated with a non-coordinating animal activator;

- (46a) meso-Me₂Si(Ind)₂ZrMe₂ and rac-Me₂Si(Ind)₂ZrMe₂ activated with N,N-dimethylanili tum tetrakis(pentaflourophenyl)boron and or triphenylcarbe pium tetrakis(pentaflourophenyl)boron;
- (47) meso-CH₂CH₂Ind)₂ZrCl₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrCl₂ (4,7-Me₂Ind = 4,7-dimethylialenyl) activated with an alumoxane;
- (48) meso-CH₂CH Ind)₂ZrMe₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrMe₂ activated with a non-coordinating anion activator;
- (48a) meso-CH₂CH₂Ind)₂ZrMe₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrMe₂ activated with N,N-directly landinium tetrakis (pentaflour ophenyl) boron and or triphenyl carbonium tetrakis (pentaflour ophenyl) boron;
- (49) meso-Me₂Si(Int)₂ZrCl₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrCl₂ activated with an alumoxane;
- (50) meso-Me₂Si(I₁I₁)₂ZrMe₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrMe₂ activated with a non-coordinating anion activator;
- (50a) meso-Me₂Si(Ir k)₂ZrMe₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrMe₂ activated with N,N-dimethyla filinium tetrakis(pentaflourophenyl)boron and or triphenylcarbor um tetrakis(pentaflourophenyl)boron;
- (51) meso-CH₂CH₂ -MeInd)₂ZrCl₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrCl₂ (4,7-Me₂Ind = 4,7-d methylindenyl) activated with an alumoxane;
- (52) meso-CH₂CH₂ -MeInd)₂ZrMe₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrMe₂ activated with a non-coordinating anion activator;

- (52a) meso-CH₂CH₂(2-Melnd)₂ZrMe₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrMe₂ activated with N,N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbo ium tetrakis(pentaflourophenyl)boron;
- (53) meso-Me₂Si(2 Melnd)₂ZrCl₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrCl₂ activated with an alumo ane:
- (54) meso-Me₂Si(2 MeInd)₂ZrMe₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrMe₂ activated with a non-coordinating anion activator;
- (54a) meso-Me₂Si(2-1eInd)₂ZrMe₂ and rac-CH₂CH₂(4,7-Me₂Ind)₂ZrMe₂ activated with such as N N-dimethylanilinium tetrakis(pentaflourophenyl)boron and or triphenylcarbor um tetrakis(pentaflourophenyl)boron;
- 58. (original) A composition comprising a homopolymer of propylene and or a copolymer of propylene and one or more of butene, pentene, hexene, octene, nonene, and decene, wherein the copolymer comprises less than 50 mole% ethylene, and wherein the homopolymer or copol mer has a Dot T-Peel of 3 or more Newtons; a viscosity of 8000 mPa•sec or less at 190 C; a branching index (g') of 0.85 or less measured at the Mz of the polymer; and an My of 100,000 or less.
- 59. (original) The composition of claim 58 wherein the homopolymer or copolymer has an Mz of 20,000-500,000.
- 60. (original) The composition of claim 58 wherein the homopolymer or copolymer has a SAFT of 60 to 130°C.
- 61. (original) The composition of claim 58 wherein the homopolymer or copolymer has a shore hardness of 60 or ess.
- 62. (original) The composition of claim 58 wherein the homopolymer or copolymer has a set time of 2 seconds or ass.

- 63. (original) The composition of claim 58 wherein the homopolymer or copolymer has a branching index (g') et 0.80 or less.
- 64. (original) The composition of claim 58 wherein the homopolymer or copolymer has a heat of fusion of 20-5 J/g.
- 65. (original) A composition comprising a polymer of propylene, having from 0 to 5 mol% ethylene and from 0 to 40 mol% of a C5 to C12 olefin, and 0 to 10 mol% of a diene where the polymer has:
 - a) a Dot T-Peel of Newton or more; and
 - b) an Mw of 100, 00 or less; and
 - c) a Mz/Mn of 2-100; and
 - an Mw of 100 00 or less and a branching index of 0.5 or less, or an Mw of 75,000 or less and a branching index of 0.6 or less, or an Mw of 50,000 or less and a branching index of 0.7 or less, or an Mw of 30,000 or less and a branching index of 0.98 or less; and
 - d) a peak melting point between 60 and 190°C, and
 - e) a viscosity of 8 00 mPa•sec or less at 190°C; and
 - f) a heat of fusion of 70 J/g or less; and
 - g) a Shore A Hard less (as measured by ASTM 2240) of 70 or less; and
 - h) A Shear Adhesian Fail Temperature 40 to 150°C; and
 - i) a set time of 5 s conds or less; and
 - j) an Mw/Mn of 3 to 75; and
 - k) an Mz of 20,000 o 500,000; and
 - 1) a melt index of 00 dg/min or less.
- 66. (original) The composition of claim 1 wherein the composition has a branching index (g') of 0.90 or less meas red at the Mz of the polymer.
- 67. (original) The composition of claim 1 wherein the composition has a branching index (g') of 0.85 or less measured at the Mz of the polymer.

- 68. (original) The composition of claim 1 wherein the composition has a branching index (g') of 0.80 or less measured at the Mz of the polymer.
- 69. (original) The composition of claim 1 wherein the composition has a branching index (g') of 0.75 or less measured at the Mz of the polymer.
- 70. (original) The composition of claim 1 wherein the composition has a branching index (g') of 0.70 or less measured at the Mz of the polymer.
- 71. (original) The composition of claim 1 wherein the composition has a branching index (g') of 0.65 or less measured at the Mz of the polymer.
- 72. (original) The composition of claim 1 wherein the composition has a branching index (g') of 0.60 or less measured at the Mz of the polymer.
- 73. (original) The composition of claim 1 wherein the composition has a branching index (g') of 0.55 or less measured at the Mz of the polymer.
- 74. (original) The composition of claim 1 wherein the composition has a branching index (g') of 0.50 or less mea ared at the Mz of the polymer.
- 75. (withdrawn) A continuous process to prepare an adhesive comprising:
 - 1) combining more mer, solvent, catalyst and activator in a reactor system,
 - 2) withdrawing polymer solution from the reactor system,
 - 3) removing at least 10% solvent from the polymer solution,
 - 4) quenching the relaction,
 - 5) devolatilizing the polymer solution to form molten polymer,
 - 6) combining the riplten polymer and one or more additives in a static mixer,
 - 7) removing the polymer combination from the static mixer, and
 - 8) pelletizing or dramming the polymer combination.
- 76. (withdrawn) A continuous process to produce a branched olefin polymer comprising:

2028

- selecting a first catalyst component capable of producing a polymer having an Mw of 80,000 or less and a crystallinity of 15% or less under selected polymerization conditions;
- 2) selecting a se ond catalyst component capable of producing polymer having an Mw of 80,000 or less and a crystallinity of 50% or more at the selected polymerization conditions;
- 3) contacting the catalyst components in the presence of one or more activators with propylene and one or more C4 to C20 olefins, and, optionally one or more C4 to C20 diolefins;
- 4) at a temperature of greater than 105°C:
- 5) at a residence time of 90 minutes or less;
- 6) wherein the rate of the first catalyst to the second catalyst is from 1:1 to 20:1;
- 7) wherein the activity of the catalyst components is at least 100 kilograms of polymer per grum of the catalyst compounds; and wherein at least 80% of the olefins are concerted to polymer.
- 77. (withdrawn) The process of claim 76 wherein:
- a) the olefins comprise propylene and one or more of butene, pentene, hexene, heptene, octene nonene, decene, dodecene; and
 - b) the temperature is greater than 110°C; and
 - c) the residence time is 120 minutes or less; and
 - d) the ratio of the rest catalyst to the second catalyst is from 1:1 to 1:10.
- 78. (withdrawn) The process of claim 76 wherein the diolefin is selected from the group consisting of 1,6-hepadiene, 1,7-octadiene, 1,8-nonadiene, 1,9-decadiene, 1,10undecadiene. 1,11 dodecadiene, 1,12-tridecadiene, 1,13-tetradecadiene, vid Inorbornene, cyclopentadiene, norbornadiene, ethylidene norbornene, divinylbenzene, dicyclipentadiene, polybutadienes having an Mw less than 1000 butadiene, entadiene, hexadiene, pentadecadiene, hexadecadiene. heptadecadiene, octa ecadiene. nonadecadiene. icosadiene, heneicosadiene, docosadiene, tricosa tiene, tetracosadiene, pentacosadiene, hexacosadiene. heptacosadiene, octac sadiene, nonacosadiene, triacontadiene, cyclopentadiene,

vinylnorbornene, porbornadiene, ethylidene norbornene, divinylbenzene, dicyclopentadiene, or combinations thereof.

- 79. (withdrawn) The process of claim 76 wherein the olefin comprises propylene and one or more of butene, partene, hexene, heptene, octene, nonene, decene, dodecene, 4-methyl-pentene-1, 3-nethyl pentene-1, and 3,5,5-trimethyl-hexene-1.
- 80. (withdrawn) A continuous process to make an adhesive comprising
 - selecting a firs catalyst component capable of producing a polymer having an Mw of 100,000 or less and a crystallinity of 20% or less under selected polymerization conditions;
 - 2) selecting a sec and catalyst component capable of producing polymer having an Mw of 100 00 or less and a crystallinity of 40% or more at the selected polymerization conditions;
 - 3) contacting, in a solvent and in a reaction zone under the selected polymerization conditions, the catalyst components in the presence of one or more activators with one or more C3 to C40 olefins, and, optionally one or more diolefins;
 - 4) at a temperature of greater than 100°C;
 - 5) at a residence time of 120 minutes or less;
 - 6) wherein the rate of the first catalyst to the second catalyst is from 1:1 to 50:1;
 - wherein the activity of the catalyst components is at least 50 kilograms of polymer per gran of the catalyst compounds; and wherein at least 80% of the olefins are converted to polymer;
 - 8) withdrawing power solution from the reaction zone;
 - 9) removing at leas 10% solvent from the polymer solution;
 - 10) quenching the reaction;
 - 11) devolatilizing the polymer solution to form molten polymer;
 - 12) combining the replication polymer and one or more additives in a static mixer;
 - 13) removing the polymer combination from the static mixer; and
 - 14) pelletizing or dramming the polymer combination.

- 81. (original) A polymer comprising one or more C3 to C40 olefins, optionally one or more diolefins, and less than 1 mole % of ethylene where the polymers has:
 - a) a Dot T-Peel of 1 Newton or more; and
 - b) a branching index (g') of 0.95 or less measured at the Mz of the polymer; and
 - c) an Mw of 100,000 or less; and

wherein the polymer has at least 2 mol% (CH₂)₂ units.

- 82. (original) The polymer of claim 81 wherein the polymer has at least 4 mol% (CH₂)₂ units.
- 83. (original) The polymer of claim 81 wherein the polymer has at least 6 mol% (CH₂)₂ units.
- 84. (original) The polymer of claim 81 wherein the polymer has at least 8 mol% (CH₂)₂ units.
- 85. (original) The polymer of claim 81 wherein the polymer has at least 10 mol% (CH₂)₂ units.
- 86. (original) The polymer of claim 81 wherein the polymer has at least 15 mol% (CH₂)₂ units.
- 87. (original) The polymer of claim 81 wherein the polymer has at least 20 mol% (CH₂)₂ units.
- 88. (original) A polymer comprising one or more C3 to C40 olefins, optionally one or more diolefins, and having between 1 and mole % of ethylene where the polymers has:
 - a) a Dot T-Pecl of Newton or more; and
 - b) a branching index (g') of 0.95 or less measured at the Mz of the polymer; and
 - an Mw of 100,000 or less; and wherein the polymer has at least 2 + X mol% (CH₂)₂ units, where X is the mole % ethylene.

- 89. (original) The polymer of claim 88 wherein the polymer has at least 4 + X mol% (CH₂)₂ units.
- 90. (original) The polymer of claim 88 wherein the polymer has at least 6 + X mol% (CH₂)₂ units.
- 91. (original) The polymer of claim 88 wherein the polymer has at least 8 + X mol% (CH₂)₂ units.
- 92. (original) The polymer of claim 88 wherein the polymer has at least 10 + X mol% (CH₂)₂ units.
- 93. (original) The polymer of claim 88 wherein the polymer has at least 15 + X mol% (CH₂)₂ units.
- 94. (original) The polymer of claim 88 wherein the polymer has at least 20 + X mol% (CH₂)₂ units.
- 95. (original) A polymer comprising one or more C3 to C40 olefins, optionally one or more diolefins, and less than 50 mole % of ethylene where the polymers has:
 - a) a Dot T-Peel of Newton or more; and
 - b) a branching index (g') of 0.95 or less measured at the Mz of the polymer; and
 - c) an Mw of 100,000 or less.
- (original) The composition of claim 1 further comprising one or hydrocarbon resins 96. selected from the group consisting of aliphatic hydrocarbon resins, aromatic modified aliphatic hydrocarbon resins, hydrogenated polycyclopentadiene polycyclopentadiene resins, gum rosins, gum rosin esters, wood rosins, wood rosin esters, tall oil rosins tall oil rosin esters, polyterpenes, aromatic modified polyterpenes, terpene phenolics, aromatic modified hydrogenated polycyclopentadiene regins, hydrogenated aliphatic resin, hydrogenated aliphatic

aromatic resins, hydrogenated terpenes and modified terpenes, and hydrogenated rosin esters.

- 97. (original) The composition of claim 1 further comprising hydrocarbon resin present at 1 weight % to about 80 weight %.
- 98. (original) The composition of claim 1 further comprising hydrocarbon resin present at 2 weight % to about 4 weight %.
- 99. (original) The composition of claim 1 further comprising hydrocarbon resin present at 3 weight % to 30 weight %.
- 100. (original) The composition of claim 1 further comprising hydrocarbon resin present at 1 weight % to about 80 weight % selected from the group consisting of:

 C5/C6 terpene resins styrene terpenes, alpha-methyl styrene terpene resins, C9 terpene resins, aromatic modified dicyclopent diene based resins, resins obtained from the cationic polymerization of compositions containing one or more of the following monomers:

 C5 diolefins; C5 olefins; C6 olefins, C9 vinylaromatics; cyclics; and or terpenes; resins obtained by the thermal polymerization of dicyclopentadiene, and/or the thermal polymerization of dimers or oligomers of cyclopentadiene and /or methylcyclopentadiene optionally with vinylaromatics.
- 101. (original) A composition comprising the polymer of claim 1 and having less than 5% hydrocarbon resin.
- 102. (original) A composition comprising the polymer of claim 1 and having less than 3% hydrocarbon resin.
- 103. (original) A composition comprising the polymer of claim 1 and having less than 1% hydrocarbon resin.

- 104. (original) A polymer comprising one or more C3 to C40 olefins where the polymers has:
 - a) a Dot T-Pcel between 1 and 10,000 Newtons; and
 - b) a branching index (g') of 0.95 or less measured at the Mz of the polymer; and
 - c) an Mw of 100,000 or less.
- 105. (original) The polymer of claim 104 wherein the polymer has a Dot T-Peel of between 3 and 4000 Newtons.
- 106. (original) The polymer of claim 104 wherein the polymer has a Dot T-Peel of between 5 and 3000 Newtons.
- 107. (original) The polymer of claim 104 wherein the polymer has a Dot T-Peel of between 10 and 2000 Newtons.
- 108. (withdrawn) The process of claim 37 wherein the second catalyst component comprises one or more of: dimethylsiladiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; dimethylsiladiyl(2-ethy) 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; dimethylsiladiyl(2-n-prepyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; dimethylsiladiyl(2-iso-hopyl, 4-[3',5'-di-tbutylphenyl]indenyl)zirconium dichloride; dimethylsiladiyl(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; dimethylsiladiyl(2-iso-httyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; dimethylsiladiyl(2-sec-hutyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; dimethylsiladiyl(2-tert-hutyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; dimethylsiladiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dichloride; dimethylsiladiyl(2-ethyl 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dichloride; dimethylsiladiyl(2-n-prepyl, 4-[3',5'-di-tbutylphenyl]indenyl) 2hafnium dimethylsiladiyl(2-iso-popyl, 4-[3',5'-di-tbutylphenyl]indenyl) 2hafnium dichloride; dimethylsiladiyl(2-buty 4-[3',5'-di-tbutylphenyl]indenyl) 2hafnium dichloride; 9-silafluorendiyl(2-metlyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; 9-silafluorendiyl(2-ethy 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; 9-silafluorendiyl(2-n-prepyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride;

9-silafluorendiyl(2-is propyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; 9-silafluorendiyl(2-n-hutyl, 4-[3',5'-di-tbutylphenyl]indenyl)zirconium dichloride; 9-silafluorendiyl(2-is butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; 9-silafluorendiyl(2-sex-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; 9-silafluorendiyl(2-ten-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂zirconium dichloride; 9-silafluorendiyl(2-mthyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dichloride; 9-silafluorendiyl(2-eth), 4-[3',5'-di-tbutylphenyl]indenyl) 2hafnium dichloride; 9-silafluorendiyl(2-n-hopyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dichloride; 9-silafluorendiyl(2-is propyl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dichloride; 9-silafluorendiyl(2-n-hutyl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dichloride; 9-silafluorendiyl(2-isa butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dichloride; 9-silafluorendiyl(2-set butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dichloride; 9-silafluorendiyl(2-teth-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂hafnium dichloride; dimethylsiladiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-n-dopyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-isd propyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-n-tyl, 4-[3',5'-di-tbutylphenyl]indenyl)zirconium dimethyl; dimethylsiladiyl(2-isd butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-sed butyl, 4-[3',5'-di-tbutylphenyl]indenyl)zirconium dimethyl: dimethylsiladiyl(2-ter butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dimethyl; dimethylsiladiyl(2-ethal, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dimethyl; dimethylsiladiyl(2-n-plopyl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dimethyl dimethylsiladiyl(2-iso propyl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dimethyl; dimethylsiladiyl(2-n-tatyl, 4-[3',5'-di-tbutylphenyl]indenyl) 2hafnium dimethyl; dimethylsiladiyl(2-iso butyl, 4-[3',5'-di-tbutylphenyl]indenyl) hafnium dimethyl: dimethylsiladiyl(2-sed butyl, 4-[3',5'-di-tbutylphenyl]indenyl) 2hafnium dimethyl; dimethylsiladiyl(2-ter butyl, 4-[3',5'-di-tbutylphenyl]indenyl) 2hafnium dimethyl; 9-silafluorendiyl(2-mathyl, 4-[3',5'-di-tbutylphenyl]indenyl)zirconium dimethyl; 9-silafluorendiyl(2-eth, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-n-thopyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-iso propyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl;

9-silafluorendiyl(2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-isd butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-se butyl, 4-[3',5'-di-tbutylphenyl]indenyl)zirconium dimethyl; 9-silafluorendiyl(2-ter butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-mahyl, 4-[3',5'-di-tbutylphenyl]indenyl) 2hafnium dimethyl; 9-silafluorendiyl(2-ett. 1, 4-[3',5'-di-tbutylphenyl]indenyl) 2hafnium dimethyl; 9-silafluorendiyl(2-n-hopyl, 4-[3',5'-di-tbutylphenyl]indenyl) 2hafnium dimethyl; 9-silafluorendiyl(2-iso propyl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-n-lityl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-isoputyl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-sectbutyl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-ter butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2hafnium dimethyl; dimethylsiladiyl(2-methyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium dichloride; dimethylsiladiyl(2-eth 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium dichloride; dimethylsiladiyl(2-n-phpyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)zirconium dichloride; dimethylsiladiyl(2-iso-tropyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium dichloride; dimethylsiladiyl(2-n-b#yl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium dichloride; dimethylsiladiyl(2-iso-utyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium dichloride: dimethylsiladiyl(2-sec dutyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)zirconium dichloride; dimethylsiladiyl(2-tert dutyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)zirconium dichloride; dimethylsiladiyl(2-methyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl) 2hafnium dichloride; dimethylsiladiyl(2-ethy 4-[3',5'-bis-trifluoromethylphenyl]indenyl) ₂hafnium dichloride;

dimethylsiladiyl(2-n-i opyl,	4-[3',5'-bis-	trifluoromethylphenyl]indenyl)2hafnium
dichloride;		

dimethylsiladiyl(2-isd propyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dichloride;

dimethylsiladiyl(2-n-tyl), 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dichloride;

dimethylsiladiyl(2-isd butyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dichloride;

dimethylsiladiyl(2-sec putyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dichloride;

dimethylsiladiyl(2-ter butyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dichloride;

9-silafluorendiyl(2-mcnyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

dimethylsiladiyl(2-eth 1, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dichloride;

9-silafluorendiyl(2-n-r ppyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-iso propyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-n-letyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-iso utyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-secoutyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-tert butyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂zirconium dichloride;

9-silafluorendiyl(2-met yl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl) ₂hafnium dichloride;

9-silafluorendiyl(2-eth), 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dichloride;

9-silafluorendiyl(2-n-pi pyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)2

hafnium dichloride;

Attorney Docket No.: 2002B140/2

	•
9-silafluorendiyl(2-isapropy	l, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)2
hafnium dichloride;	
9-silafluorendiyl(2-n-atyl,	4-[3',5'-bis-trifluoromethylphenyl]indenyl)2hafnium
dichloride;	
9-silafluorendiyl(2-isc butyl,	4-[3',5'-bis-trifluoromethylphenyl]indenyl)2hafnium
dichloride;	•
9-silafluorendiyl(2-see butyl,	4-[3',5'-bis-trifluoromethylphenyl]indenyl)2hafnium
dichloride;	
9-silafluorendiyl(2-ter butyl,	4-[3',5'-bis-trifluoromethylphenyl]indenyl)2hafnium
dichloride;	
dimethylsiladiyl(2-me yl,	4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium
dimethyl;	
dimethylsiladiyl(2-eth	4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium
dimethyl;	• •
dimethylsiladiyl(2-n-p pyl,	4-[3',5'-bis-trifluoromethylphenyl]indenyl) ₂ zirconium
dimethyl;	1.
	4-[3',5'-bis- trifluoromethylphenyl]indenyl) ₂ zirconium
dimethyl;	•
dimethylsiladiyl(2-n-b	4-[3',5'-bis-trifluoromethylphenyl]indenyl)zzirconium
dimethyl;	• 1
dimethylsiladiyl(2-iso-utyl,	4-[3',5'-bis-trifluoromethylphenyl]indenyl) ₂ zirconium

dimethyl;

dimethylsiladiyl(2-tert utyl,

utyl,

4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium

2hafnium

4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium

dimethylsiladiyl(2-met.yl,

4-[3',5'-bis-trifluoromethylphenyl]indenyl)

dimethyl; dimethylsiladiyl(2-ethy

dimethylsiladiyl(2-sec-

4-[3',5'-bis-trifluoromethylphenyl]indenyl) 2hafnium

dimethylsiladiyl(2-n-pr

4-[3',5'-bistrifluoromethylphenyl]indenyl)2hafnium

dimethyl;

dimethyl;

dimethyl;

dimethyl;

dimethylsiladiyl(2-isc propyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dimethyl;

dimethylsiladiyl(2-n-letyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dimethyl;

dimethylsiladiyl(2-isd butyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dimethyl;

dimethylsiladiyl(2-sec butyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dimethyl;

dimethylsiladiyl(2-ter butyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-menyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂zirconium dimethyl;

dimethylsiladiyl(2-eth), 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-n-pppyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium dimethyl;

9-silafluorendiyl(2-iso propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium dimethyl;

9-silafluorendiyl(2-n-batyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-iso utyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)2zirconium dimethyl;

9-silafluorendiyl(2-sec outyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-tert outyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂zirconium dimethyl;

9-silafluorendiyl(2-me yl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl) 2hafnium dimethyl;

9-silafluorendiyl(2-eth), 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂hafnium dimethyl;

9-silafluorendiyl(2-n-p pyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂ hafnium dimethyl;

9-silafluorendiyl(2-iso-ropyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2

hafnium dimethyl;				
9-silafluorendiyl(2-n-	utyl,	4-[3',5'-bis	s-trifluoromethylphenyl]inder	ıyl)₂hafnium
dimethyl;				
9-silafluorendiyl(2-ise	butyl,	4-[3',5'-bis	s-trifluoromethylphenyl]inder	ıyl)₂hafnium
dimethyl;		:		
9-silafluorendiyl(2-se	butyl,	4-[3',5'-bis	s-trifluoromethylphenyl]inden	yl) ₂ hafnium
dimethy];				
9-silafluorendiyl(2-ter	butyl,	4-[3',5'-bis	-trifluoromethylphenyl]inden	yl) ₂ hafnium
dimethyl;				
dimethylsiladiyl(2-eth	1, 4-[3',	o di-iso-propy	lphenyl]indenyl)2zirconium o	lichloride;
dimethylsiladiyl(2-n-p			'-di-iso-propylphenyl]indenyl	
dichloride		;		
dimethylsiladiyl(2-iso	propyl,	4-[3',5	'-di-iso-propylphenyl]indenyl)2zirconium
dichloride;		:		
dimethylsiladiyl(2-n-b	tyl,	4-[3',5	di-iso-propylphenyl]indenyl) ₂ zirconium
dichloride;				
dimethylsiladiyl(2-iso	utyl,	4-[3',5'	-di-iso-propylphenyl]indenyl) ₂ zirconium
dichloride;				
dimethylsiladiyl(2-sec	outyl,	4-[3',5'	-di-iso-propylphenyl]indenyl) ₂ zirconium
dichloride;	1			
dimethylsiladiyl(2-tert	outyl,	4-[3',5'	-di-iso-propylphenyl]indenyl	₂ zirconium
dichloride;	i	•		
dimethylsiladiyl(2-eth	, 4-[3',5	di-iso-propy	phenyl]indenyl) 2hafnium dio	hloride;
dimethylsiladiyl(2-n-p	pyl,	4-[3',5'-di-i	so-propylphenyl]indenyl)	2hafnium
dichloride;		1		
dimethylsiladiyl(2-iso-	ropyl,	4-[3',5'-di-	iso-propylphenyl]indenyl)	₂ hafnium
dichloride;	·			
dimethylsiladiyl(2-n-b	yl, 4-[3'	,5'-di- iso-pro	pylphenyl]indenyl) 2hafnium	dichloride;
dimethylsiladiyl(2-iso-	utyl,	4-[3',5'-di-	iso-propylphenyl]indenyl)	₂ hafnium
dichloride;				
dimethylsiladiyl(2-sec-	utyl,	4-[3',5'-di-	iso-propylphenyl]indenyl)	₂ hafnium
dichloride;	,			

		· :		
dimethylsiladiyl(2-ter	butyl,	4-[3',5'-di-	iso-propylphenyl]indenyl)	2hafnium
dichloride;				
9-silafluorendiyl(2-et	yl, 4-[3',	5'-di-iso-propy	lphenyl]indenyl)2zirconium d	ichloride;
9-silafluorendiyl(2-n-	ropyl,	4-[3',5'	-di-iso-propylphenyl]indenyl)	zirconium
dichloride;				
9-silafluorendiyl(2-iso	propyl,	4-[3',5'	-di-iso-propylphenyl]indenyl)	zirconium
dichloride;		<u>:</u>		
9-silafluorendiyl(2-n-	ıtyl,	4-[3',5'	di-iso-propylphenyl]indenyl)	zirconium
dichloride;		1		
9-silafluorendiyl(2-iso	butyl,	4-[3',5'-	di-iso-propylphenyl]indenyl);	zirconium
dichloride;		: i		
9-silafluorendiyl(2-sed	butyl,	4-[3',5'-	di-iso-propylphenyl]indenyl)2	zirconium
dichloride;		; ;		
9-silafluorendiyl(2-ter	butyl,	4-[3',5'-	di-iso-propylphenyl]indenyl)2	zirconium
dichloride;		:		
9-silafluorendiyl(2-eth	1, 4-[3',5	: i'-di-iso-propyl	phenyl]indenyl) 2hafnium dicl	nloride;
9-silafluorendiyl(2-n-p	i e	:	i'-di-iso-propylphenyl]indenyl	
dichloride;		i :		
9-silafluorendiyl(2-iso	propyl,	4-[3',5	di-iso-propylphenyl]indenyl)₂hafnium
dichloride;		!		
9-silafluorendiyl(2-n-b	tyl, 4-[3	,5'-di-iso-prop	ylphenyl]indenyl)₂hafnium di	chloride;
9-silafluorendiyl(2-iso		<u> </u>	'-di-iso-propylphenyl]indenyl	
dichloride;		· :		
9-silafluorendiyl(2-sec	outyl,	4-[3',5	'-di-iso-propylphenyl]indenyl) ₂ hafnium
dichloride;				
9-silafluorendiyl(2-tert	outyl,	4-[3',5	-di-iso-propylphenyl]indenyl	₂ hafnium
dichloride;		· •		
dimethylsiladiyl(2-ethy	, 4-[3', 5 '	di-iso-propylp	henyl]indenyl)2zirconium din	nethyl;
			oylphenyl]indenyl)2zirconium	
dimethylsiladiyl(2-iso-		F .	li-iso-propylphenyl]indenyl) ₂₂	
dimethyl;		:		
dimethylsiladiyl(2-n-bı	yl, 4-[3',	5'-di-iso-propy	lphenyl]indenyl)2zirconium d	imethyl;
			ylphenyl]indenyl) ₂ zirconium (- -
		:		

dimethylsiladiyl(2-se butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-ter-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-ctl-1, 4-[3',5'-di-iso-propylphenyl]indenyl) 2hafnium dimethyl; dimethylsiladiyl(2-n-popyl, 4-[3',5'-di-iso-propylphenyl]indenyl) 2hafnium dimethyl; dimethylsiladiyl(2-iso propyl, 4-[3',5'-diiso-propylphenyl]indenyl) 2hafnium dimethyl; dimethylsiladiyl(2-n-latyl, 4-[3',5'-di-iso-propylphenyl]indenyl) hafnium dimethyl; dimethylsiladiyl(2-iso butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-secoutyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-tert butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-eth 1, 4-[3',5'-di-iso-propylphenyl|indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-n-popyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-iso propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-n-batyl, 4-[3',5'-di-iso-propylphenyl)indenyl)zirconium dimethyl; 9-silafluorendiyl(2-iso butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-secoutyl, 4-[3',5'-di-iso-propylphenyl]indenyl)zirconium dimethyl; 9-silafluorendiyl(2-tert butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-eth, 4-[3',5'-di-iso-propylphenyl]indenyl) hafnium dimethyl; 9-silafluorendiyl(2-n-p-ppyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-iso-ropyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-n-b yl, 4-[3',5'-di-iso-propylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-iso-tutyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2hafnium dimethyl;

9-silafluorendiyl(2-se-butyl, 4+[3',5'-di-iso-propylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-tel-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2hafnium dimethyl; dimethylsiladiyl(2-menyl, 4-[3],5'-di-phenylphenyl]indenyl)zirconium dichloride; dimethylsiladiyl(2-ethel, 4-[3'|5'-di-phenylphenyl]indenyl)zirconium dichloride; dimethylsiladiyl(2-n-n opyl, 4 [3',5'-di-phenylphenyl]indenyl)zirconium dichloride; dimethylsiladiyl(2-iso propyl, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dichloride; dimethylsiladiyl(2-n-tatyl, 4-[3],5'-di-phenylphenyl]indenyl)zirconium dichloride; dimethylsiladiyl(2-iso butyl, 4 [3',5'-di-phenylphenyl]indenyl)zirconium dichloride: dimethylsiladiyl(2-secontyl, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dichloride; dimethylsiladiyl(2-ter butyl, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dichloride; dimethylsiladiyl(2-me yl, 4-[3",5'-di-phenylphenyl]indenyl)2hafnium dichloride; dimethylsiladiyl(2-eth, 4-[3',5'-di-phenylphenyl]indenyl)2hafnium dichloride; dimethylsiladiyl(2-n-pppyl, 4/[3',5'-di-phenylphenyl]indenyl)2hafnium dichloride; dimethylsiladiyl(2-iso ropyl, 4 [3',5'-di-phenylphenyl]indenyl) hafnium dichloride; dimethylsiladiyl(2-n-batyl, 4-[3],5'-di-phenylphenyl]indenyl)2hafnium dichloride; dimethylsiladiyl(2-iso-utyl, 4/[3',5'-di-phenylphenyl]indenyl)2hafnium dichloride; dimethylsiladiyl(2-sec butyl, 4 3',5'-di-phenylphenyl]indenyl)2hafnium dichloride; dimethylsiladiyl(2-tert butyl, 4-[3',5'-di-phenylphenyl]indenyl)2hafnium dichloride; 9-silafluorendiyl(2-me yl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dichloride; 9-silafluorendiyl(2-eth, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dichloride: 9-silafluorendiyl(2-n-pappyl, 4 [3',5'-di-phenylphenyl]indenyl)zirconium dichloride; 9-silafluorendiyl(2-isopropyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dichloride;

9-silafluorendiyl(2-n-b tyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-iso- utyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-sec utyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-tert utyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dichloride;
9-silafluorendiyl(2-met yl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-eth; , 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-n-pi pyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-iso- ropyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-n-bi yl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;
9-silafluorendiyl(2-iso- utyl, 4-[3',5'-di-phenylphenyl]indenyl)₂hafnium dichloride;

9-silafluorendiyl(2-se butyl, 4-[3',5'-di-phenylphenyl]indenyl)2hafnium dichloride; 9-silafluorendiyl(2-tel-butyl, # [3',5'-di-phenylphenyl]indenyl) hafnium dichloride: dimethylsiladiyl(2-me hyl, 4-[\$],5'-di-phenylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-eth-1, 4-[3'] di-phenylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-n-raopyl, 44 3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-isopropyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-n-tatyl, 4-[8],5'-di-phenylphenyl]indenyl)zirconium dimethyl; dimethylsiladiyl(2-iso butyl, 4 [3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-sec_butyl, 4 [3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-ter butyl, 4 [3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; dimethylsiladiyl(2-me nyl, 4-[3,5'-di-phenylphenyl]indenyl) hafnium dimethyl; dimethylsiladiyl(2-eth 1, 4-[3',5'-di-phenylphenyl]indenyl)2hafnium dimethyl; dimethylsiladiyl(2-n-phopyl, 4473',5'-di-phenylphenyl]indenyl)2hafnium dimethyl; dimethylsiladiyl(2-iso-propyl, 44[3',5'-di-phenylphenyl]indenyl)2hafnium dimethyl; dimethylsiladiyl(2-n-batyl, 4-[\$\\5'-di-phenylphenyl]indenyl)2hafnium dimethyl; dimethylsiladiyl(2-iso-butyl, 4||\beta',5'-di-phenylphenyl]indenyl)2hafnium dimethyl; dimethylsiladiyl(2-sec butyl, 4 [3',5'-di-phenylphenyl]indenyl)2hafnium dimethyl; dimethylsiladiyl(2-tert butyl, 4 3',5'-di-phenylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-me nyl, 4-[3",5'-di-phenylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-ethal, 4-[3',5]-di-phenylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-n-plopyl, 4 [B',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl; 9-silafluorendiyl(2-iso-propyl, #[3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-n-batyl, 4-[\$\frac{1}{5}'-di-phenylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-iso-butyl, 4 [B',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; 9-silafluorendiyl(2-sec butyl, 4 [3',5'-di-phenylphenyl]indenyl)zirconium dimethyl: 9-silafluorendiyl(2-tert butyl, 4 3',5'-di-phenylphenyl]indenyl)zirconium dimethyl; 9-silafluorendiyl(2-metyl, 4-[3]5'-di-phenylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-eth, 4-[3', 4'di-phenylphenyl]indenyl)2hafnium dichloride; 9-silafluorendiyl(2-n-pppyl, 4-3',5'-di-phenylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)2hafnium dimethyl: 9-silafluorendiyl(2-n-b yl, 4-[1/5'-di-phenylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-iso-utyl, 4-\f3',5'-di-phenylphenyl]indenyl)2hafnium dimethyl; 9-silafluorendiyl(2-sec-butyl, 4\(\frac{1}{2}\)',5'-di-phenylphenyl]indenyl)2hafnium dimethyl;

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9-silafluorendiyl(2-te	-butyl,	4	[3',5'-di-phenylphenyl]indenyl)2hafnium dim	ethyl;
dimethylsiladiyl(2-m	hyl,	4	[3',5'-di-tbutylphenyl]indenyl) ₂ η^4 -1,4-diph	enyl-1,3-
butadiene;				
dimethylsiladiyl(2-etl	/l, 4	+1	3',5'-di-tbutylphenyl]indenyl)2 η ⁴ -1,4-diph	enyl-1,3-
butadiene;				
dimethylsiladiyl(2-n-	ropyl,	4	-[3',5'-di-tbutylphenyl]indenyl)2 η ⁴ -1,4-diph	enyl-1,3-
butadiene;		ا ا		
dimethylsiladiyl(2-iso	propyl,		4-[3',5'-di-tbutylphenyl]indenyl) ₂ η^4 -1,4-diphenyl	enyl-1,3-
butadiene;				
dimethylsiladiyl(2-n-l	ityl,	4-	[3',5'-di-tbutylphenyl]indenyl)2 η ⁴ -1,4-diphe	enyl-1,3-
butadiene;				
dimethylsiladiyl(2-iso	butyl,	4	-[3',5'-di-tbutylphenyl]indenyl) ₂ η ⁴ -1,4-dipho	enyl-1,3-
butadiene;				
dimethylsiladiyl(2-sec	butyl,	4	-[3',5'-di-tbutylphenyl]indenyl)2 η ⁴ -1,4-diphe	enyl-1,3-
butadiene;				
dimethylsiladiyl(2-ter	butyl,	4	-[3',5'-di-tbutylphenyl]indenyl) ₂ η ⁴ -1,4-diphe	nyl-1,3-
butadiene;				
dimethylsiladiyl(2-eth	1, 4-[3',	5	-bis-trifluoromethylphenyl]indenyl) ₂ η ⁴ -1,4-d	iphenyl-
1,3-butadiene;				
dimethylsiladiyl(2-n-p	opyl,		4-[3',5'-bis-trifluoromethylphenyl]indenyl)2	η4-1,4-
diphenyl-1,3-butadien	•	-		
dimethylsiladiyl(2-iso	propyl,		4-[3',5'-bis- trifluoromethylphenyl]indenyl)2	η ⁴ -1,4-
diphenyl-1,3-butadien	ŧ.			
dimethylsiladiyl(2-n-b	tyl,	4	-[3',5'-bis-trifluoromethylphenyl]indenyl) ₂	η4-1,4-
diphenyl-1,3-butadien	Į.			
dimethylsiladiyl(2-iso-	outyl,		4-[3',5'-bis-trifluoromethylphenyl]indenyl) ₂	η4-1,4-
diphenyl-1,3-butadien	4			
dimethylsiladiyl(2-sec	outyl,	de Land	4-[3',5'-bis-trifluoromethylphenyl]indenyl) ₂	η ⁴ -1,4-
diphenyl-1,3-butadiene	4			
dimethylsiladiyl(2-tert	outyl,	1	4-[3',5'-bis-trifluoromethylphenyl]indenyl) ₂	η4-1,4-
diphenyl-1,3-butadiene				
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dimethylsiladiyl(2-ethyl, 4-[3'|5'-di-iso-propylphenyl]indenyl), n⁴-1,4-diphenyl-1,3butadiene: dimethylsiladiyl(2-n-propyl, 4-[3',5'-di-iso-propylphenyl)indenyl) 2 n⁴-1,4-diphenyl-1,3-butadiene; dimethylsiladiyl(2-iso propyl, 4-[3',5'-di-iso-propylphenyl]indenyl) n⁴-1,4-diphenyl-1,3-butadiene; dimethylsiladiyl(2-n-tatyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene; dimethylsiladiyl(2-iso butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene; dimethylsiladiyl(2-sec butyl, 4 [3',5'-di-iso-propylphenyl]indenyl)2 n4-1,4-diphenyl-1,3-butadiene; dimethylsiladiyl(2-ter butyl, 4 [3',5'-di-iso-propylphenyl]indenyl) 1,4-diphenyl-1,3-butadiene; dimethylsiladiyl(2-me hyl, $4 [3',5'-di-phenylphenyl]indenyl)_2 \eta^4-1,4-diphenyl-1,3$ butadiene: $4-\frac{1}{3}$ ',5'-di-phenylphenyl]indenyl)₂ η^4-1 ,4-diphenyl-1,3dimethylsiladiyl(2-ethel, butadiene; dimethylsiladiyl(2-n-p opyl, 4-3',5'-di-phenylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3butadiene; dimethylsiladiyl(2-iso-propyl, #[3',5'-di-phenylphenyl]indenyl)₂ n⁴-1,4-diphenyl-1,3butadiene; dimethylsiladiyl(2-n-b-tyl, 4/1/3',5'-di-phenylphenyl)indenyl)₂ η⁴-1,4-diphenyl-1,3butadiene; dimethylsiladiyl(2-iso-butyl, 4-3',5'-di-phenylphenyl]indenyl), n⁴-1,4-diphenyl-1,3butadiene; dimethylsiladiyl(2-sec putyl, $4 [3',5'-di-phenylphenyl]indenyl)_2 \eta^4-1,4-diphenyl-1,3$ butadiene; dimethylsiladiyl(2-tert butyl, 4 3',5'-di-phenylphenyl)indenyl)₂ n⁴-1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-metryl, 4/13',5'-di-tbutylphenyl]indenyl) n⁴-1,4-diphenyl-1,3butadiene;

9-silafluorendiyl(2-et yl, 4[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-n-ropyl, 4-[3',5'-di-tbutylphenyl]indenyl)2 η^4 -1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-isd-propyl 4-[3',5'-di-tbutylphenyl]indenyl) η⁴-1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-n-lutyl, $[3',5'-di-tbutylphenyl]indenyl)_2$ $\eta^4-1,4-diphenyl-1,3$ butadiene; 9-silafluorendiyl(2-isd butyl, [4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-se butyl, 4-[3',5'-di-tbutylphenyl]indenyl) η^4 -1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-ter butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ $\eta^4-1,4-diphenyl-1,3$ butadiene; 9-silafluorendiyl(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2 $\eta^4 - 1.4$ diphenyl-1,3-butadien; 9-silafluorendiyl(2-n-popyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2 diphenyl-1,3-butadien 9-silafluorendiyl(2-iso propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl) η^4 -1,4diphenyl-1,3-butadien 9-silafluorendiyl(2-n-latyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2 diphenyl-1,3-butadien 9-silafluorendiyl(2-isobutyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2 diphenyl-1,3-butadien 9-silafluorendiyl(2-sec butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl) diphenyl-1,3-butadiene 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2 9-silafluorendiyl(2-ter butyl, diphenyl-1,3-butadiene 9-silafluorendiyl(2-eth 1, 4-[3,5'-di-iso-propylphenyl]indenyl) 1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-n-propyl, 4 3',5'-di-iso-propylphenyl]indenyl) 2 η^4 -1,4-diphenyl-1,3-butadiene;

9-silafluorendiyl(2-is propyl 4-[3',5'-di-iso-propylphenyl]indenyl) n⁴-1,4-diphenyl-1,3-butadiene: 9-silafluorendiyl(2-n-utyl, #[3',5'-di-iso-propylphenyl]indenyl)2 η^4 -1,4-diphenyl-1,3-butadiene; 9-silafluorendiyl(2-isd-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl) η⁴-1,4-diphenyl-1,3-butadiene; 9-silafluorendiyl(2-se butyl, 4-[3',5'-di-iso-propylphenyl]indenyl) η⁴-1,4-diphenyl-1,3-butadiene: 9-silafluorendiyl(2-ter-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl) η⁴-1,4-diphenyl-1,3-butadiene; 9-silafluorendiyl(2-methyl, 4[3',5'-di-phenylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-eth/1, 4-13',5'-di-phenylphenyllindenyl)₂ n⁴-1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-n-popyl, 4/3',5'-di-phenylphenyl)indenyl) n⁴-1.4-diphenyl-1.3butadiene: 9-silafluorendiyl(2-iso propyl, 4-[3',5'-di-phenylphenyl]indenyl), n⁴-1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-n-latyl, 4 3',5'-di-phenylphenyl]indenyl) η⁴-1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-iso butyl, 4-3',5'-di-phenylphenyl)indenyl) n⁴-1,4-diphenyl-1,3butadiene: 9-silafluorendiyl(2-sed butyl, $\frac{1}{3}$,5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3butadiene; 9-silafluorendiyl(2-ter butyl, 4 [3',5'-di-phenylphenyl]indenyl) n⁴-1,4-diphenyl-1,3butadiene: dimethylamidoborane(methy 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane (ethyl, 4 [3',5'-di-tbutylphenyl]indenyl), zirconium dichloride: dimethylamidoborane(n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)zirconium dichloride; dimethylamidoborane(iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride;

dimethylamidoborane 2-n-but 4-[3',5'-di-tbutylphenyl]indenyl)zirconium dichloride: dimethylamidoborane 2-iso-buyl. 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane 2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium dimethylamidoborane -ethyl, dichloride; dimethylamidoborane -n-probyl, 4-[3',5'-bistrifluoromethylphenyl indenyl zirconium dichloride; dimethylamidoborane -iso-propyl, 4-[3',5'-bistrifluoromethylphenyl indenyl zirconium dichloride; dimethylamidoborane -n-buty 4-[3',5'-bistrifluoromethylphenyl indenyl zirconium dichloride; dimethylamidoborane -iso-butyl, 4-[3',5'-bistrifluoromethylphenyl indenyl zirconium dichloride; dimethylamidoborane sec-butyl, 4-[3',5'-bistrifluoromethylphenyl indenyl zirconium dichloride; dimethylamidoborane tert-buyl, 4-[3',5'-bistrifluoromethylphenyl hdenyl zirconium dichloride; dimethylamidoborane ethyl. 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane -n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dichloride dimethylamidoborane iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane(n-butyl 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dichloride;

dimethylamidoborane -sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane -methyl, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dichloride; dimethylamidoborane ethyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane -n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane 4-[3',5'-di-phenyl]indenyl)2zirconium -iso-propyl, dichloride; dimethylamidoborane -n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane -iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dichloride; dimethylamidoborane—methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene; dimethylamidoborane ethyl, 4-[3',5'-di-tbutylphenyl]indenyl) 1,4-diphenyl-1,3butadiene; dimethylamidoborane (1-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl) 1, 4-[3',5'-di-tbutylphenyl]indenyl 1,3-butadiene; dimethylamidoborane(iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ diphenyl-1,3-butadiene dimethylamidoborane (n-buty), 4-[3',5'-di-tbutylphenyl]indenyl) 1,4-diphenyl 1,3-butadiene; dimethylamidoborane iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl) 1,4-diphenyl-1,3-butadiene;

dimethylamidoborane -sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene; dimethylamidoborane tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene; dimethylamidoborane -ethyl 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4diphenyl-1,3-butadier dimethylamidoborane n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl), n⁴-1.4diphenyl-1,3-butadien dimethylamidoborane iso-propyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)₂ n⁴-1,4-diphenyl-1,3-buta ene; dimethylamidoborane -n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1,4diphenyl-1,3-butadien dimethylamidoborane -iso-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl) n⁴-1.4diphenyl-1,3-butadien dimethylamidoborane -sec-batyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η^4 -1.4diphenyl-1,3-butadien dimethylamidoborane tert-batyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadene; dimethylamidoborane ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene; dimethylamidoborane n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl) $_2$ η^4 -1,4diphenyl-1,3-butadien dimethylamidoborane iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl) diphenyl-1,3-butadien dimethylamidoborane -n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ diphenyl-1,3-butadien dimethylamidoborane(iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ diphenyl-1,3-butadiend dimethylamidoborane(sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ diphenyl-1,3-butadiene dimethylamidoborane(tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ diphenyl-1,3-butadiene

dimethylamidoborand(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene; dimethylamidoborand (2-ethyl 4-[3',5'-di-phenylphenyl]indenyl) 1,4-diphenyl-1,3butadiene: dimethylamidoborane (2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl) 1,4-diphenyl-1,3-butadiene; dimethylamidoborane 2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl) η⁴-1,4diphenyl-1,3-butadiene: dimethylamidoborane 2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl) n⁴-1.4-diphenyl-1,3-butadiene; dimethylamidoborane 2-iso-batyl, 4-[3',5'-di-phenylphenyl]indenyl)2 n4-1,4-diphenyl-1,3-butadiene; dimethylamidoborane 2-sec-butyl, 4-[3',5'-di-phenyl]indenyl)₂ diphenyl-1,3-butadiene; dimethylamidoborane 2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl) diphenyl-1,3-butadiene: dimethylamidoborane 2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl) zirconium dimethyl; dimethylamidoborane -ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane 2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane proppyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(2-n-buty1), 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(P-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(2 ethyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)2zirconium dimethyl; 48

ACC Prosecution\2002\2002b140\US\2002B140-2-US-2005APR21-RESTRICTION REQUIREMENT DOC

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dimethylamidoborane(2-n-propyl, 4-[3',5'-bistrifluoromethylphenyl]indenylpzirconium dimethyl; dimethylamidoborane(2-iso-ptopyl, 4-[3',5'-bistrifluoromethylphenyl]indenylbzirconium dimethyl; dimethylamidoborane(2-n-but) 4-[3',5'-bistrifluoromethylphenyl]indenylbzirconium dimethyl; dimethylamidoborane(2-iso-butyl, 4-[3',5'-bistrifluoromethylphenyllindeny zirconium dimethyl: dimethylamidoborane(2-sec-bayl, 4-[3',5'-bistrifluoromethylphenyllindenyllizirconium dimethyl; dimethylamidoborane(2-tert-batyl, 4-[3',5'-bistrifluoromethylphenyl]indenyl zirconium dimethyl; dimethylamidoborane(2-cthyl 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(2-n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl dimethylamidoborane(2-iso-prepyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(2-n-buty 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(2-sec-buryl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(2-tert-bity), 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(2-methy 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dimethyl: dimethylamidoborane(2-n-proph), 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; dimethylamidoborane(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; 49

dimethylamidoborane(2-n-but)l,	4-[3',5'-di-phenylphenyl]indenyl)2zirconium
dimethyl;	
dimethylamidoborane(2-iso-butyl,	4-[3',5'-di-phenylphenyl]indenyl)2zirconium
dimethyl;	
dimethylamidoborane(2-sec-batyl,	4-[3',5'-di-phenylphenyl]indenyl)zirconium
dimethyl;	
dimethylamidoborane(2-tert-butyl,	4-[3',5'-di-phenylphenyl]indenyl)2zirconium
dimethyl;	
diisopropylamidoborane(2-methyl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dichloride;	:
diisopropylamidoborane(2-eth/l,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dichloride;	
diisopropylamidoborane(2-n-propyl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dichloride;	
diisopropylamidoborane(2-iso propyl,	.4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dichloride;	
diisopropylamidoborane(2-n-brityl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dichloride;	
diisopropylamidoborane(2-iso-butyl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dichloride;	
diisopropylamidoborane(2-sec butyl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dichloride;	,
diisopropylamidoborane(2-tert butyl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dichloride;	
diisopropylamidoborane(2-ethy,	4-[3',5'-bis-
trifluoromethylphenyl]indenyl zirconium	dichloride;
diisopropylamidoborare(2-n-propyl,	4-[3',5'-bis-
trifluoromethylphenyl indenyl) zirconium	dichloride;
diisopropylamidoborane(2-iso-propyl,	4-[3',5'-bis-
trifluoromethylphenyl indenyl) zirconium	dichloride;
diisopropylamidoborane(2-n-butyl,	4-[3',5'-bis-
trifluoromethylphenyl]indenyl)zirconium	dichloride;

diisopropylamidoborane(2-isd-butyl,

4-[3',5'-bis-

trifluoromethylphenyllindeny zirconium dichloride;

diisopropylamidoborane(2-sed buty),

4-[3',5'-bis-

trifluoromethylphenyllindeny zirconium dichloride;

diisopropylamidoborane(2-ter-butyl,

4-[3',5'-bis-

trifluoromethylphenyl]indenyl zirconium dichloride;

diisopropylamidoborane(2-ethil,

4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium

dichloride;

diisopropylamidoborane(2-n-intopyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium

dichloride

diisopropylamidoborane(2-iso propyl,

4-[3',5'-di-iso-

propylphenyl]indenyl zirconi im dichloride;

diisopropylamidoborane(2-n-bityl,

4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium

dichloride;

diisopropylamidoborane(2-iso butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium

dichloride;

diisopropylamidoborane(2-sec butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium

dichloride;

diisopropylamidoborame(2-tert putyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium

dichloride;

diisopropylamidoborane(2-metryl,

4-[3',5'-di-phenylphenyl]indenyl)2zirconium

dichloride;

diisopropylamidoborane(2-eth)

4-[3',5'-di-phenylphenyl]indenyl)2zirconium

dichloride;

diisopropylamidoborane(2-n-phopyl,

4-[3',5'-di-phenylphenyl]indenyl)₂zirconium

dichloride;

diisopropylamidoborane(2-iso-propyl,

4-[3',5'-di-phenylphenyl]indenyl)2zirconium

dichloride;

diisopropylamidoborane(2-n-baryl,

4-[3',5'-di-phenylphenyl]indenyl)2zirconium

dichloride:

diisopropylamidoborane(2-iso-butyl,

4-[3',5'-di-phenylphenyl]indenyl)₂zirconium

dichloride;

diisopropylamidoborane(2-sed butyl, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dichloride; diisopropylamidoborane(2-ter-butyl, 4-[3',5'-di-phenyl]indenyl)2zirconium dichloride; diisopropylamidoborane(2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-diphenyl-1,3-butadiene; diisopropylamidoborane(2-ethil, 4-[3',5'-di-tbutylphenyl]indenyl) η⁴-1,4-diphenyl-1,3-butadiene; diisopropylamidoborahe(2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ n⁴-1,4diphenyl-1,3-butadiene; diisopropylamidoborane(2-isopropyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ diphenyl-1,3-butadiene; diisopropylamidoborane(2-n-bltyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene: diisopropylamidoborane(2-iso butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ $\eta^4 - 1.4$ diphenyl-1,3-butadiene; diisopropylamidoborahe(2-sec butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ diphenyl-1,3-butadiene; 4-[3',5'-di-tbutylphenyl]indenyl)2 diisopropylamidoborane(2-tert butyl, diphenyl-1,3-butadiene; diisopropylamidoborane(2-eth), 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η⁴-1,4diphenyl-1,3-butadiene; diisopropylamidoborane(2-n-propyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl), n⁴-1,4-diphenyl-1,3-butadiene; diisopropylamidoborade(2-iso-propyl, 4-[3',5'-bis- trifluoromethylphenyl]indenyl)2 η⁴-1,4-diphenyl-1,3-butadiene: diisopropylamidoborade(2-n-byl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene; diisopropylamidoborate(2-iso-tutyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ n⁴-1,4-diphenyl-1,3-butadiene; diisopropylamidoborare(2-sec-putyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ η⁴-1,4-diphenyl-1,3-butadiene;

diisopropylamidoborane(2-ter butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂ n⁴-1,4-diphenyl-1,3-butadiene; diisopropylamidoborane(2-eth), 4-[3';5'-di-iso-propylphenyl]indenyl)2 n⁴-1.4diphenyl-1,3-butadiene: diisopropylamidoborane(2-n-thopyl, 4-[3',5'-di-iso-propylphenyl]indenyl) 2 η^4 -1,4diphenyl-1,3-butadiene; diisopropylamidoborane(2-iso propyl, 4-[3',5'-di-iso-propylphenyl]indenyl) η⁴-1,4diphenyl-1,3-butadiene; diisopropylamidoborane(2-n-thtyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ diphenyl-1,3-butadiene; diisopropylamidoborahe(2-iso butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η⁴-1,4diphenyl-1,3-butadiene; diisopropylamidoborane(2-sechutyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η⁴-1,4diphenyl-1,3-butadiene; diisopropylamidoborahe(2-tert butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -1,4diphenyl-1,3-butadiene; diisopropylamidoborane(2-methyl, 4-[3',5'-di-phenylphenyl]indenyl) n⁴-1.4diphenyl-1,3-butadiene; diisopropylamidoborahe(2-eth), 4-[3',5'-di-phenylphenyl]indenyl)₂ n⁴-1,4-diphenyl-1,3-butadiene; diisopropylamidoborane(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ n4-1,4diphenyl-1,3-butadiene; diisopropylamidoborane(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ diphenyl-1,3-butadiene; diisopropylamidoborane(2-n-bityl, $\eta^4 - 1.4 -$ 4-[3',5'-di-phenylphenyl]indenyl)₂ diphenyl-1,3-butadiend; diisopropylamidoborade(2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ diphenyl-1,3-butadiene; diisopropylamidoborade(2-sec butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ diphenyl-1,3-butadiene; diisopropylamidoborare(2-tert butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ diphenyl-1,3-butadiene;

diisopropylamidoborane(2-me	hyl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dimethyl;		
diisopropylamidoborane(2-eth	1,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dimethyl;		
diisopropylamidoborane(2-n-	opyl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dimethyl;		
diisopropylamidoborane(2-iso	propyl,	. 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dimethyl;		:
diisopropylamidoborane(2-n-b	tyl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dimethyl;		: •
diisopropylamidoborane(2-iso	putyl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dimethyl;	·	:
diisopropylamidoborane(2-sec	butyl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dimethyl;		
diisopropylamidoborane(2-tert	butyl,	4-[3',5'-di-tbutylphenyl]indenyl)2zirconium
dimethyl;		
diisopropylamidoborane(2-eth	,	4-[3',5'-bis-
trifluoromethylphenyl]indenyl	zirconium	dimethyl;
diisopropylamidoborane(2-n-p	opyl,	4-[3',5'-bis-
trifluoromethylphenyl]indenyl	zirconium	dimethyl;
diisopropylamidoborane(2-iso-	ropyl,	4-[3',5'-bis-
trifluoromethylphenyl]indenyl	zirconium	dimethyl;
diisopropylamidoborane(2-n-b	tyl,	4-{3',5'-bis-
trifluoromethylphenyl]indenyl	zirconium	dimethyl;
diisopropylamidoborane(2-iso	utyl,	4-[3',5'-bis-
trifluoromethylphenyl]indenyl	zirconium	dimethyl;
diisopropylamidoborane(2-sec-	utyl,	4-[3',5'-bis-
trifluoromethylphenyl]indenyl)	zirconium	dimethyl;
diisopropylamidoborane(2-tert	H ·	4-[3',5'-bis-
trifluoromethylphenyl]indenyl	zirconium	; dimethyl;
diisopropylamidoborane(2-ethy	4-[3	5'-di-iso-propylphenyl]indenyl)2zirconium
dimethyl;		

diisopropylamidoborane(2-n-thopyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl diisopropylamidoborane(2-iso propyl, 4-[3',5'-di-isopropylphenyl]indenyl)2zirconium dimethyl; diisopropylamidoborane(2-n-hityl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; diisopropylamidoborane(2-iso butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)2zirconium dimethyl; diisopropylamidoborane(2-sechutyl, 4-[3',5'-di-iso-propylphenyl]indenyl)zirconium dimethyl; diisopropylamidoborane(2-terd butyl, 4-[3,5'-di-iso-propylphenyl]indenyl)zirconium dimethyl; diisopropylamidoborane(2-menyl, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dimethyl; diisopropylamidoborane(2-eth 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; diisopropylamidoborane(2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; diisopropylamidoborane(2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dimethyl; diisopropylamidoborane(2-n-buyl, 4-[3',5'-di-phenylphenyl]indenyl)zzirconium dimethyl; diisopropylamidoborane(2-iso-dutyl, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dimethyl; diisopropylamidoborane(2-sechutyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; diisopropylamidoborane(2-tert butyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl; bis(trimethylsilyl)amidoborane 2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; bis(trimethylsilyl)amidoborane 2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium dichloride; 55

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bis(trimethylsilyl)amidoboran	(2-n-propyl,	4-[3',5'-di-
tbutylphenyl]indenyl)zirconh	n dichloride;	
bis(trimethylsilyl)amidoboran	(2-iso-propyl,	4-[3',5'-di-
tbutylphenyl]indenyl)zirconi	m dichloride;	
bis(trimethylsilyl)amidoboran	2-n-butyl, 4-[3',5'-di-tbutylphenyl]inde	enyl)₂zirconium
dichloride;		
bis(trimethylsilyl)amidoborari	2-iso-butyl,	4-[3',5'-di-
tbutylphenyl]indenyl);zirconi	n dichloride;	
bis(trimethylsilyl)amidoborar	2-sec-butyl,	4-[3',5'-di-
tbutylphenyl]indenyl)zirconit	n dichloride;	
bis(trimethylsilyl)amidoborar	2-tert-butyl,	4-[3',5'-di-
tbutylphenyl]indenyl)zirconii	n dichloride;	
bis(trimethylsilyl)amidoborare	2-ethyl,	4-[3',5'-bis-
trifluoromethylphenyllindenyl	zirconium dichloride;	
bis(trimethylsilyl)amidoborari	(2-n-propyl,	4-[3',5'-bis-
trifluoromethylphenyllindenyl	zirconium dichloride;	
bis(trimethylsilyl)amidoborark	(2-iso-propyl,	4-[3',5'-bis-
trifluoromethylphenyllindenyl	żirconium dichloride;	
bis(trimethylsilyl)amidoborark	(2-n-butyl,	4-[3',5'-bis-
trifluoromethylphenyl indeny	zirconium dichloride;	
bis(trimethylsilyl)amidoboran	2-iso-butyl,	4-[3',5'-bis-
trifluoromethylphenyl indeny	zirconium dichloride;	
bis(trimethylsilyl)amidoboran	2-sec-butyl,	4-[3',5'-bis-
trifluoromethylphenyl indeny	zirconium dichloride;	
bis(trimethylsilyl)amidoboran	2-tert-butyl,	4-[3',5'-bis-
trifluoromethylphenyl indenyl	zirconium dichloride;	
bis(trimethylsilyl)amidoborane	2-ethyl,	4-[3',5'-di-iso-
propylphenyl]indenyl)zirconi	n dichloride;	
bis(trimethylsilyl)amidoborane	2-n-propyl,	4-[3',5'-di-iso-
propylphenyl]indenyl)zirconi	n dichloride	
bis(trimethylsilyl)amidoboran	2-iso-propyl,	4-[3',5'-di-iso-
propylphenyl]indenyl)zircon	n dichloride;	

bis(trimethylsilyl)amidobora 2-n-butyl, 4-[3',5'-di-isopropylphenyl]indenyl]zircoriim dichloride; bis(trimethylsilyl)amidoborate 2-iso-butyl, 4-[3',5'-di-isopropylphenyl]indenyl]zirconim dichloride; bis(trimethylsilyl)amidoborane 2-sec-butyl. 4-[3',5'-di-isopropylphenyl]indenyl]zircon im dichloride; bis(trimethylsilyl)amidoborard(2-tert-butyl, 4-[3',5'-di-isopropylphenyl]indenyl)zirconi im dichloride; bis(trimethylsilyl)amidoborard (2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dichloride; bis(trimethylsilyl)amidoborand(2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)zirconium dichloride: bis(trimethylsilyl)amidoborand(2-n-propyl, 4-[3',5'-diphenylphenyl]indenyl]zircortim dichloride; bis(trimethylsilyl)amidoborare 2-iso-propyl, 4-[3',5'-diphenylphenyl]indenyl zircori in dichloride; bis(trimethylsilyl)amidoborar 2-n-butyl, 4-[3',5'-diphenylphenyl]indenyl]zirconin dichloride; bis(trimethylsilyl)amidoborare 2-iso-butyl, 4-[3',5'-diphenylphenyl]indenyl zircon um dichloride; bis(trimethylsilyl)amidoboran 2-sec-butyl, 4-[3',5'-diphenylphenyl]indenyl zircon im dichloride; bis(trimethylsilyl)amiddborant 2-tert-butyl, 4-[3',5'-diphenylphenyl]indenyl)zirconium dichloride; bis(trimethylsilyl)amidoborant 2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4diphenyl-1,3-butadiene; bis(trimethylsilyl)amiddborant 2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)2 diphenyl-1,3-butadiene; bis(trimethylsilyl)amiddborant 2-n-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4diphenyl-1,3-butadiene; bis(trimethylsilyl)amidoborant 2-iso-propyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4diphenyl-1,3-butadiene;

bis(trimethylsilyl)amilibborarie 2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-

diphenyl-1,3-butadiene;

bis(trimethylsilyl)ami@borane (2-iso-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-

diphenyl-1,3-butadiene;

bis(trimethylsilyl)amidoborand (2-sec-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η⁴-1,4-

diphenyl-1,3-butadiene;

bis(trimethylsilyl)amidoborand (2-tert-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)₂ η^4 -1,4-

diphenyl-1,3-butadiene;

bis(trimethylsilyl)amidoborand(2-ethyl, 4-[3',5'-bis-trifluoromethylphenyl)indenyl)2

n4-1,4-diphenyl-1,3-butadiene

bis(trimethylsilyl)amidoborard 2-n-propyl, 4-[3',5'-bis-

trifluoromethylphenyllindenyll \(\eta^4 - 1.4 - diphenyl - 1.3 - butadiene; \)

bis(trimethylsilyl)amidoborari 2-iso-propyl, 4-[3',5'-bis-

trifluoromethylphenyl jindeny 1,4-diphenyl-1,3-butadiene;

bis(trimethylsilyl)amidoborand(2-n-butyl, 4-[3',5'-bis-trifluoromethylphenyl]indenyl)₂

η⁴-1,4-diphenyl-1,3-batadiene

bis(trimethylsilyl)amidoborant 2-iso-butyl, 4-[3',5'-bis-

trifluoromethylphenyl indeny \(\text{n}^4-1,4-\text{diphenyl-1,3-butadiene} \);

bis(trimethylsilyl)amiddboran 2-sec-butyl, 4-[3',5'-bis-

trifluoromethylphenyl indeny \ \ \eta^4-1,4-diphenyl-1,3-butadiene;

bis(trimethylsilyl)amiddborant 2-tert-butyl, 4-[3',5'-bis-

trifluoromethylphenyl indeny! 1,4-diphenyl-1,3-butadiene;

bis(trimethylsilyl)amiddborant 2-ethyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η⁴-1,4-

diphenyl-1,3-butadiene;

bis(trimethylsilyl)amiddborane 2-n-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl) 2 η⁴-

1,4-diphenyl-1,3-butadiene;

bis(trimethylsilyl)amiddborane 2-iso-propyl, 4-[3',5'-di-iso-propylphenyl]indenyl) η⁴-

1,4-diphenyl-1,3-butadiene;

bis(trimethylsilyl)amiddborane 2-n-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η⁴-

1,4-diphenyl-1,3-butadiene;

bis(trimethylsilyl)amideborane 2-iso-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η⁴-

1,4-diphenyl-1,3-butadiene;

bis(trimethylsilyl)amidoboran (2-sec-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η^4 -

1,4-diphenyl-1,3-butadiene;

bis(trimethylsilyl)amidoborar (2-tert-butyl, 4-[3',5'-di-iso-propylphenyl]indenyl)₂ η⁴-

1,4-diphenyl-1,3-butadiene;

bis(trimethylsilyl)ami@borau@2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η⁴-1,4-

diphenyl-1,3-butadien;

bis(trimethylsilyl)amidoborand 2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-

diphenyl-1,3-butadiene;

bis(trimethylsilyl)amidoborand2-n-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η⁴-1,4-

diphenyl-1,3-butadiene;

bis(trimethylsilyl)amidoboran (2-iso-propyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -

1,4-diphenyl-1,3-butadiene;

bis(trimethylsilyl)amidoboran (2-n-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η⁴-1,4-

diphenyl-1,3-butadiene;

bis(trimethylsilyl)amiddborant 2-iso-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η⁴-1,4-

diphenyl-1,3-butadiene:

bis(trimethylsilyl)amidoborant [2-sec-butyl, 4-[3',5'-di-phenylphenyl]indenyl) $_2$ η^4 -1,4-

diphenyl-1,3-butadiene;

bis(trimethylsilyl)amiddborane 2-tert-butyl, 4-[3',5'-di-phenylphenyl]indenyl)₂ η^4 -1,4-

diphenyl-1,3-butadiene;

bis(trimethylsilyl)amiddborand 2-methyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium

dimethyl;

bis(trimethylsilyl)amidoborane 2-ethyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium

dimethyl;

bis(trimethylsilyl)amiddborane 2-n-propyl, 4-[3',5'-di-

tbutylphenyl]indenyl)2 zirconium dimethyl;

bis(trimethylsilyl)amidiborane 2-iso-propyl, 4-[3',5'-di-

tbutylphenyl]indenyl)2zirconium dimethyl;

bis(trimethylsilyl)amicoborane 2-n-butyl, 4-[3',5'-di-tbutylphenyl]indenyl)2zirconium

dimethyl:

bis(trimethylsilyl)amidborane 2-iso-butyl, 4-[3',5'-di-

tbutylphenyl]indenyl)2 zirconium dimethyl;

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59

gion\2002\2002b140\U\$\2002B140-2-U\$-2005APR21-RESTRICTION REQUIREMENT_DOC

bis(trimethylsilyl)amidoboran	2-sec-butyl,	4-[3',5'-di-
tbutylphenyl]indenyl)zirconi	1 •	
bis(trimethylsilyl)amidoboran		4-[3',5'-di-
tbutylphenyl]indenyl)zirconi	n dimethyl;	
bis(trimethylsilyl)amidoboran		4-[3',5'-bis-
trifluoromethylphenyllindenyl	zirconium dimethyl;	
bis(trimethylsilyl)amidoboran	2-n-propyl,	4-[3',5'-bis-
trifluoromethylphenyl indenyl	zirconium dimethyl;	
bis(trimethylsilyl)amidoboran	2-iso-propyl,	4-[3',5'-bis-
trifluoromethylphenyl	zirconium dimethyl;	
bis(trimethylsilyl)amidoboran	2-n-butyl,	4-[3',5'-bis-
trifluoromethylphenyl indenyl	zirconium dimethyl;	
bis(trimethylsilyl)amidoboran	2-iso-butyl,	4-[3',5'-bis-
trifluoromethylphenyl indeny	zirconium dimethyl;	
bis(trimethylsilyl)amidoborane	2-sec-butyl,	4-[3',5'-bis-
trifluoromethylphenyl indenyl	zirconium dimethyl;	
bis(trimethylsilyl)amidoboran	2-tert-butyl,	4-[3',5'-bis-
trifluoromethylphenyl indenyl	zirconium dimethyl;	
bis(trimethylsilyl)amidoboran	2-ethyl,	4-[3',5'-di-iso-
propylphenyl]indenyl) zirconi	n dimethyl;	
bis(trimethylsilyl)amidoboran	2-n-propyl,	4-[3',5'-di-iso-
propylphenyl]indenyl) zirconii	n dimethyl	
bis(trimethylsilyl)amidoborane	2-iso-propyl,	4-[3',5'-di-iso-
propylphenyl]indenyl)zirconi	n dimethyl;	
bis(trimethylsilyl)amidoboran	2-n-butyl,	4-[3',5'-di-iso-
propylphenyl]indenyl) zirconii	n dimethyl;	
bis(trimethylsilyl)amidoborana	2-iso-butyl,	4-[3',5'-di-iso-
propylphenyl]indenyl) zirconil	n dimethyl;	
bis(trimethylsilyl)amidoboran	2-sec-butyl,	4-[3',5'-di-iso-
propylphenyl]indenyl) zirconi	n dimethyl;	
bis(trimethylsilyl)amicoborane	2-tert-butyl,	4-[3',5'-di-iso-
propylphenyl]indenyl) zirconii	n dimethyl;	

bis(trimethylsilyl)amidoboran (2-methyl, 4-[3',5'-di-phenylphenyl]indenyl)₂zirconium dimethyl;

bis(trimethylsilyl)amiddborans 2-ethyl, 4-[3',5'-di-phenylphenyl]indenyl)2zirconium dimethyl;

bis(trimethylsilyl)amidoborant (2-n-propyl, 4-[3',5'-di-

phenylphenyl]indenyl) zircon im dimethyl;

bis(trimethylsilyl)amidoboran 2-iso-propyl, 4-[3',5'-di-

phenylphenyl]indenyl zircon un dimethyl;

bis(trimethylsilyl)amidoborant 2-n-butyl, 4-[3',5'-di-

phenylphenyl]indenyl zirconiem dimethyl;

bis(trimethylsilyl)amidoborant 2-iso-butyl, 4-[3',5'-di-

phenylphenyl]indenyl zircon im dimethyl;

bis(trimethylsilyl)amiqoboran (2-sec-butyl, 4-[3',5'-di-

phenylphenyl]indenyl zirconium dimethyl; or

bis(trimethylsilyl)amidoboran (2-tert-butyl, 4-[3',5'-di-

phenylphenyl]indenyl zircon im dimethyl.

- 109. (original) A polymer comprising one or more C3 to C40 olefins and less than 1 mole % of ethylene where the polymer has:
 - a) a Dot T-Peel of 1 New on or more; and
 - b) a branching index (g') at 0.95 or less measured at the Mz of the polymer; and
 - c) an Mw of 100,000 or less; and the polymer has an amorphous component which contains at least 3 mol% (CH₂)₂ units.
- 110. (original) The polymer of claim 109 where the amorphous component contains at least 6 mol % (CH₂)₂ units.
- 111. (original) The polymer of claim 109 where the amorphous component contains at least 10 mol % (CH₂)₂ units.
- 112. (original) The polymer of claim 109 where the amorphous component contains at least 15 mol % (CH₂)₂ mits.

- 113. (original) The polymer of claim 109 where the amorphous component contains at least 20 mol % (CH₂)2 units.
- 114. (original) A polymer comprising one or more C3 to C40 olefins and between 1 and 5 mole % of ethylene where the polymer has:
 - a) a Dot T-Peel of 1 Newen or more; and
 - b) a branching index (g') at 0.95 or less measured at the Mz of the polymer; and
 - c) an Mw of 100,000 or less; and the polymer has an arre-rphous component which contains at least 3 + X mol% (CH₂)₂ units, where X is the mol % ethylene in the polymer.
- 115. (original) The polymer of claim 114 where the amorphous component contains at least 6 + X mol % (CF₂)₂ unit.
- 116. (original) The polymer of claim 114 where the amorphous component contains at least 10 + X mol % (CH₂)₂ units.
- 117. (original) The polymer of claim 114 where the amorphous component contains at least 15 + X mol % (CH₂)₂ units.
- 118. (original) The polymer of claim 114 where the amorphous component contains at least 20 + X mol % (CH₂)₂ units.

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